

```

PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MMM MMM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP PP PP RR RR II MM MM MM MM GG CC CC CC
PP PP PP RR RR II MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG GGGGG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC

```

```

JJJJJJJJJ 11 00000000 EEEEEEEEEEE
JJJJJJJJJ 111 000000000 EEEEEEEEEEE
JJ 1111 00 0000 EE
JJ 11 00 00 00 EE
JJ 11 00 00 00 EE
JJ 11 00 00 00 EEEEEEE
JJ 11 00 00 00 EEEEEEE
JJ JJ 11 00 00 00 EE
JJ JJ 11 0000 00 EE
JJ JJ 11 000 00 EE
JJJJJJJ 111111111 000000000 EEEEEEEEEEE
JJJJJJ 111111111 00000000 EEEEEEEEEEE

```

****E	START	JOB	10	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	10	START	E****
****E	START	JOB	10	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	10	START	E****
****E	START	JOB	10	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	10	START	E****
****E	START	JOB	10	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	10	START	E****

J E S 2 J O B L O G

```
2.26.10 JOB  10 $HASP373 PRIMGCC  STARTED - INIT  1 - CLASS A - SYS PI5B
2.26.10 JOB  10 IEF403I PRIMGCC  - STARTED - TIME=02.26.10
2.26.12 JOB  10 IEFACTRT - Stepname Procstep Program  Retcode
2.26.12 JOB  10 PRIMGCC  PRIMES  COMP   GCC          RC= 0000
2.26.12 JOB  10 PRIMGCC  PRIMES  ASM    IFOX00       RC= 0000
2.26.13 JOB  10 PRIMGCC  PRIMES  GO     LOADER       RC= 0000
2.26.13 JOB  10 IEF404I PRIMGCC  - ENDED - TIME=02.26.13
2.26.13 JOB  10 $HASP395 PRIMGCC  ENDED
```

----- JES2 JOB STATISTICS -----

05 JUL 25 JOB EXECUTION DATE

119 CARDS READ

251 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.04 MINUTES EXECUTION TIME

```

1  //PRIMGCC JOB (GCC), JOB 10
//      'Eratosthenes Sieve',
//      CLASS=A,
//      MSGCLASS=E,
//      REGION=8M,TIME=1440,
//      MSGLEVEL=(1,1),
//      USER=GUEST1,PASSWORD=          GENERATED BY IKJEFF10
*****
***
*** Name: SYS2.JCLLIB(PRIMGCC)
***
*** Desc: Sieve of Eratosthenes programmed in C, optimized for use
***        with GNU C version 3.2.3 MVS V8.5, as ported by Paul Edwards.
***
***        All prime numbers up to the value entered via
***        //G0.SYSIN DD are computed.
***
***        GCC's printf integer to string conversion (%d) performs
***        poorly on MVS 3.8], while a combined usage of sprintf and
***        fwrite shows significantly better performance (though still
***        not satisfactorily) with a strong correlation between the
***        number of calls to sprintf and the performance. For that
***        reason the code was optimized to minimize the number of
***        sprintf calls to one per line as opposed to one per prime
***        which one would normally code.
***
*****
2  //PRIMES EXEC GCCCG,COPTS='-v -O3'
3  XXGCCCLG PROC SOUT='*',PDPPREF='PDPCLIB',INFILE='',
XX      COPTS='',LOPTS='',
XX COS1='-S -ansi -pedantic-errors',
XX COS2='-o dd:out -'
***
4  XXCOMP EXEC PGM=GCC,COND=(4,LT),
XX PARM='&COS1 &COPTS &COS2'
***
*** INCLUDE SHOULD HAVE YOUR OWN HEADERS ADDED
***
5  XXINCLUDE DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6  XXSYSINCL DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7  //COMP.SYSIN DD DATA,DLM=@@
X/SYSIN DD DSN=&INFILE,DISP=SHR
8  XXOUT DD DSN=&TEMP,DISP=(,PASS),UNIT=SYSALLDA,
XX      DCB=(LRECL=80,BLKSIZE=6160,RECFM=FB),
XX      SPACE=(6160,(500,500))
9  XXSYSPRINT DD SYSOUT=&SOUT
10 XXSYSTEM DD SYSOUT=&SOUT
***
11 XXASM EXEC PGM=IFX00,
XX      PARM='DECK,NOLIST',
XX      COND=(4,LT,COMP)
12 XXSYSLIB DD DSN=SYS1.MACLIB,DISP=SHR,DCB=BLKSIZE=32720
13 XX      DD DSN=&PDPPREF..MACLIB,DISP=SHR
14 XXSYSUT1 DD UNIT=SYSALLDA,SPACE=(CYL,(20,10))
15 XXSYSUT2 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
16 XXSYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
17 XXSYSPRINT DD SYSOUT=&SOUT
18 XXSYSLIN DD DUMMY
19 XXSYSGO DD DUMMY
20 XXSYSPUNCH DD DSN=&OBJSET,UNIT=SYSALLDA,SPACE=(80,(200,200)),
XX      DISP=(,PASS)

```

```
21  XXSYSIN      DD DSN=&&TEMP,DISP=(OLD,DELETE)
    ***
22  XXGO         EXEC PGM=LOADER,PARM='&LOPTS',
    XX          COND=((4,LT,COMP),(4,LT,ASM))
23  XXSYSLIN     DD DSN=&&OBJSET,DISP=(OLD,DELETE)
24  XXSYSLIB     DD DSN=&PDPPREF..NCALIB,DISP=SHR
25  XXSYSUT1     DD UNIT=SYSALLDA,SPACE=(CYL,(2,1))
26  XXSYSLOUT    DD SYSOUT=&SOUT
27  XXSYSPRINT   DD SYSOUT=&SOUT
28  XXSYSTEM     DD SYSOUT=&SOUT
29  //GO.SYSIN    DD *
    X/SYSIN      DD DUMMY
30  //GO.OUTPUT   DD SYSOUT=*,DCB=(RECFM=FBA,LRECL=161,BLKSIZE=32200)
```

STMT NO. MESSAGE

```
4 IEF653I SUBSTITUTION JCL - PARM='-S -ansi -pedantic-errors -v -O3 -o dd:out -'
5 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7 IEF653I SUBSTITUTION JCL - DSN=,DISP=SHR
9 IEF653I SUBSTITUTION JCL - SYSOUT=*
10 IEF653I SUBSTITUTION JCL - SYSOUT=*
13 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.MACLIB,DISP=SHR
17 IEF653I SUBSTITUTION JCL - SYSOUT=*
22 IEF653I SUBSTITUTION JCL - PGM=LOADER,PARM='',
24 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.NCALIB,DISP=SHR
26 IEF653I SUBSTITUTION JCL - SYSOUT=*
27 IEF653I SUBSTITUTION JCL - SYSOUT=*
28 IEF653I SUBSTITUTION JCL - SYSOUT=*
IEF236I ALLOC. FOR PRIMGCC COMP PRIMES
IEF237I 299 ALLOCATED TO INCLUDE
IEF237I 298 ALLOCATED TO SYS00008
IEF237I 299 ALLOCATED TO SYSINCL
IEF237I JES2 ALLOCATED TO SYSIN
IEF237I 292 ALLOCATED TO OUT
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO SYSTEM
IEF142I PRIMGCC COMP PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I PDPCLIB.INCLUDE KEPT *-----0
IEF285I VOL SER NOS= TK5002.
IEF285I SYS1.UCAT.TK5 KEPT *-----0
IEF285I VOL SER NOS= TK5001.
IEF285I PDPCLIB.INCLUDE KEPT *-----13
IEF285I VOL SER NOS= TK5002.
IEF285I JES2.JOB00010.SI0101 SYSIN
IEF285I SYS25186.T022610.RA000.PRIMGCC.TEMP PASSED *-----4
IEF285I VOL SER NOS= WORK03.
IEF285I JES2.JOB00010.S00103 SYSOUT
IEF285I JES2.JOB00010.S00104 SYSOUT
IEF373I STEP /COMP / START 25186.0226
IEF374I STEP /COMP / STOP 25186.0226 CPU 0MIN 01.89SEC SRB 0MIN 00.09SEC VIRT 4164K SYS 228K
*****
* 1. Jobstep of job: PRIMGCC Stepname: COMP Program name: GCC Executed on 05.07.25 from 02.26.10 to 02.26.12 *
* elapsed time 00:00:02,34 CPU-Identifier: PI5B Page-in: 0 *
* CPU time 00:00:01,98 Virtual Storage used: 4164K Page-out: 0 *
* corr. CPU: 00:00:01,98 CPU time has been corrected by 1 / 1,0 multiplier *
*
* I/O Operation *
* Number of records read via DD * or DD DATA: 85 *
* 299.....0 298.....0 299.....13 DMY.....0 292.....4 DMY.....0 DMY.....0 *
*
* Charge for step (w/o SYSOUT): 3,30 *
*****
IEF236I ALLOC. FOR PRIMGCC ASM PRIMES
IEF237I 390 ALLOCATED TO SYSLIB
IEF237I 299 ALLOCATED TO
IEF237I 298 ALLOCATED TO SYS00010
IEF237I 290 ALLOCATED TO SYSUT1
IEF237I 293 ALLOCATED TO SYSUT2
IEF237I 291 ALLOCATED TO SYSUT3
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY ALLOCATED TO SYSLIN
IEF237I DMY ALLOCATED TO SYSGO
IEF237I 291 ALLOCATED TO SYSPUNCH
IEF237I 292 ALLOCATED TO SYSIN
```

IEF142I PRIMGCC ASM PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS1.MACLIB	KEPT	*-----10
IEF285I	VOL SER NOS= TK5RES.		
IEF285I	PDPCLIB.MACLIB	KEPT	*-----7
IEF285I	VOL SER NOS= TK5002.		
IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
IEF285I	VOL SER NOS= TK5001.		
IEF285I	SYS25186.T022610.RA000.PRIMGCC.R00000001	DELETED	*-----28
IEF285I	VOL SER NOS= WORK01.		
IEF285I	SYS25186.T022610.RA000.PRIMGCC.R00000002	DELETED	*-----9
IEF285I	VOL SER NOS= WORK04.		
IEF285I	SYS25186.T022610.RA000.PRIMGCC.R00000003	DELETED	*-----8
IEF285I	VOL SER NOS= WORK02.		
IEF285I	JES2.JOB00010.S00105	SYSOUT	
IEF285I	SYS25186.T022610.RA000.PRIMGCC.OBJSET	PASSED	*-----32
IEF285I	VOL SER NOS= WORK02.		
IEF285I	SYS25186.T022610.RA000.PRIMGCC.TEMP	DELETED	*-----5
IEF285I	VOL SER NOS= WORK03.		

IEF373I STEP /ASM / START 25186.0226

IEF374I STEP /ASM / STOP 25186.0226 CPU 0MIN 00.14SEC SRB 0MIN 00.01SEC VIRT 2152K SYS 200K

*	2. Jobstep of job: PRIMGCC	Stepname: ASM	Program name: IFOX00	Executed on 05.07.25 from 02.26.12 to 02.26.12	*
*	elapsed time	00:00:00,24	CPU-Identifier: PI5B	Page-in: 0	*
*	CPU time	00:00:00,15	Virtual Storage used: 2152K	Page-out: 0	*
*	corr. CPU:	00:00:00,15	CPU time has been corrected by 1 / 1,0 multiplier		*

* I/O Operation

* Number of records read via DD * or DD DATA: 0

* 390.....10 299.....7 298.....0 290.....28 293.....9 291.....8 DMY.....0 DMY.....0 DMY.....0 291.....32

* 292.....5

* Charge for step (w/o SYSOUT): 0,25

IEF236I ALLOC. FOR PRIMGCC GO PRIMES

IEF237I 291 ALLOCATED TO SYSLIN

IEF237I 299 ALLOCATED TO SYSLIB

IEF237I 298 ALLOCATED TO SYS00012

IEF237I 293 ALLOCATED TO SYSUT1

IEF237I JES2 ALLOCATED TO SYSLOUT

IEF237I JES2 ALLOCATED TO SYSPRINT

IEF237I JES2 ALLOCATED TO SYSTEM

IEF237I JES2 ALLOCATED TO SYSIN

IEF237I JES2 ALLOCATED TO OUTPUT

IEF142I PRIMGCC GO PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS25186.T022610.RA000.PRIMGCC.OBJSET	DELETED	*-----33
---------	---------------------------------------	---------	----------

IEF285I VOL SER NOS= WORK02.

IEF285I	PDPCLIB.NCALIB	KEPT	*-----124
---------	----------------	------	-----------

IEF285I VOL SER NOS= TK5002.

IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
---------	---------------	------	---------

IEF285I VOL SER NOS= TK5001.

IEF285I	SYS25186.T022610.RA000.PRIMGCC.R00000004	DELETED	*-----0
---------	--	---------	---------

IEF285I VOL SER NOS= WORK04.

IEF285I	JES2.JOB00010.S00106	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00010.S00107	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00010.S00108	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00010.SI0102	SYSIN	
---------	----------------------	-------	--

IEF285I	JES2.JOB00010.S00109	SYSOUT	
---------	----------------------	--------	--

IEF373I STEP /GO / START 25186.0226

IEF374I STEP /GO / STOP 25186.0226 CPU 0MIN 00.06SEC SRB 0MIN 00.01SEC VIRT 528K SYS 240K

*	3. Jobstep of job: PRIMGCC	Stepname: GO	Program name: LOADER	Executed on 05.07.25 from 02.26.12 to 02.26.13	*
---	----------------------------	--------------	----------------------	--	---

```
*      elapsed time 00:00:00,14      CPU-Identifier: PI5B      Page-in:      0      *
*      CPU time 00:00:00,07      Virtual Storage used: 528K      Page-out:      0      *
*      corr. CPU: 00:00:00,07      CPU time has been corrected by 1 / 1,0 multiplier      *
*
*      I/O Operation      *
*      Number of records read via DD * or DD DATA:      1      *
*      291.....33 299.....124 298.....0 293.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0      *
*
*      Charge for step (w/o SYSOUT):      0,11      *
*****
IEF375I JOB /PRIMGCC / START 25186.0226
IEF376I JOB /PRIMGCC / STOP 25186.0226 CPU      0MIN 02.09SEC SRB      0MIN 00.11SEC
```

Using built-in specs.

Configured with: ./configure --target=i370-ibm-mvspdp --enable-languages=c

Thread model: single

gcc version 3.2.3 MVS V8.5

cc1 -lang-c -std=c89 -v -iprefix ../lib/gcc-lib/i370/1.1/ -D__GNUC__=3 -D__GNUC_MINOR__=2 -D__GNUC_PATCHLEVEL__=3 -D__GXX_ABI_VERSION=1000

GNU CPP version 3.2.3 MVS V8.5 (cpplib) (370/MVS)

GNU C version 3.2.3 MVS V8.5 (mvs)

compiled by GNU C version 3.2.3 MVS V8.5.

#include "... " search starts here:

End of search list.

VS LOADER

OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=307200,NAME=**GO

TOTAL LENGTH	EBC0
ENTRY ADDRESS	AC0A0

2	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	
73	79	83	89	97	101	103	107	109	113	127	131	137	139	149	151	
179	181	191	193	197	199	211	223	227	229	233	239	241	251	257	263	
283	293	307	311	313	317	331	337	347	349	353	359	367	373	379	383	
419	421	431	433	439	443	449	457	461	463	467	479	487	491	499	503	
547	557	563	569	571	577	587	593	599	601	607	613	617	619	631	641	
661	673	677	683	691	701	709	719	727	733	739	743	751	757	761	769	
811	821	823	827	829	839	853	857	859	863	877	881	883	887	907	911	
947	953	967	971	977	983	991	997	1009	1013	1019	1021	1031	1033	1039	1049	1
1087	1091	1093	1097	1103	1109	1117	1123	1129	1151	1153	1163	1171	1181	1187	1193	1
1229	1231	1237	1249	1259	1277	1279	1283	1289	1291	1297	1301	1303	1307	1319	1321	1
1381	1399	1409	1423	1427	1429	1433	1439	1447	1451	1453	1459	1471	1481	1483	1487	1
1523	1531	1543	1549	1553	1559	1567	1571	1579	1583	1597	1601	1607	1609	1613	1619	1
1663	1667	1669	1693	1697	1699	1709	1721	1723	1733	1741	1747	1753	1759	1777	1783	1
1823	1831	1847	1861	1867	1871	1873	1877	1879	1889	1901	1907	1913	1931	1933	1949	1
1993	1997	1999														

303 primes up to 2000 found.

```

PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MMM MMM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP PP PP RR RR II MM MM MM MM GG GG CC CC CC
PP PP PP RR RR II MM MM MM MM GG GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC

```

```

JJJJJJJJJ 11 00000000 EEEEEEEEEEE
JJJJJJJJJ 111 000000000 EEEEEEEEEEE
JJ 1111 00 0000 EE
JJ 11 00 00 00 EE
JJ 11 00 00 00 EE
JJ 11 00 00 00 EEEEEEE
JJ 11 00 00 00 EEEEEEE
JJ JJ 11 00 00 00 EE
JJ JJ 11 0000 00 EE
JJ JJ 11 000 00 EE
JJJJJJJ 111111111 000000000 EEEEEEEEEEE
JJJJJJ 111111111 00000000 EEEEEEEEEEE

```

```

****E END JOB 10 PRIMGCC Eratosthenes Sieve ROOM 3.06.00 AM 05 JUL 25 PRINTER4 SYS PI5B JOB 10 END E****
****E END JOB 10 PRIMGCC Eratosthenes Sieve ROOM 3.06.00 AM 05 JUL 25 PRINTER4 SYS PI5B JOB 10 END E****
****E END JOB 10 PRIMGCC Eratosthenes Sieve ROOM 3.06.00 AM 05 JUL 25 PRINTER4 SYS PI5B JOB 10 END E****
****E END JOB 10 PRIMGCC Eratosthenes Sieve ROOM 3.06.00 AM 05 JUL 25 PRINTER4 SYS PI5B JOB 10 END E****

```

```

PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MMM MMM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP PP PP RR RR II MM MM MM MM GG CC CC CC
PP PP PP RR RR II MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG GGGGG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC

```

```

JJJJJJJJJ 11 333333333 EEEEEEEEEEE
JJJJJJJJJ 111 33333333333 EEEEEEEEEEE
JJ 1111 33 33 EE
JJ 11 33 EE
JJ 11 33 EE
JJ 11 3333 EEEEEEE
JJ 11 3333 EEEEEEE
JJ JJ 11 33 EE
JJ JJ 11 33 EE
JJ JJ 11 33 EE
JJJJJJJ 111111111 33333333333 EEEEEEEEEEE
JJJJJJ 111111111 333333333 EEEEEEEEEEE

```

****E	START	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	START	E****
****E	START	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	START	E****
****E	START	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	START	E****
****E	START	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	START	E****

J E S 2 J O B L O G

```
2.50.07 JOB 13 $HASP373 PRIMGCC STARTED - INIT 1 - CLASS A - SYS PI5B
2.50.07 JOB 13 IEF403I PRIMGCC - STARTED - TIME=02.50.07
2.50.09 JOB 13 IEFACTRT - Stepname Procstep Program Retcode
2.50.09 JOB 13 PRIMGCC PRIMES COMP GCC RC= 0000
2.50.09 JOB 13 PRIMGCC PRIMES ASM IFOX00 RC= 0000
2.50.09 JOB 13 PRIMGCC PRIMES GO LOADER RC= 0000
2.50.09 JOB 13 IEF404I PRIMGCC - ENDED - TIME=02.50.09
2.50.09 JOB 13 $HASP395 PRIMGCC ENDED
```

----- JES2 JOB STATISTICS -----

05 JUL 25 JOB EXECUTION DATE

119 CARDS READ

251 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.04 MINUTES EXECUTION TIME

```

1  //PRIMGCC JOB (GUEST1GCC), JOB 13
//      'Eratosthenes Sieve',
//      CLASS=A,
//      MSGCLASS=E,
//      REGION=8M,TIME=1440,
//      MSGLEVEL=(1,1),
//      USER=GUEST1,PASSWORD=          GENERATED BY IKJEFF10
*****
***
*** Name: SYS2.JCLLIB(PRIMGCC)
***
*** Desc: Sieve of Eratosthenes programmed in C, optimized for use
***        with GNU C version 3.2.3 MVS V8.5, as ported by Paul Edwards.
***
***        All prime numbers up to the value entered via
***        //G0.SYSIN DD are computed.
***
***        GCC's printf integer to string conversion (%d) performs
***        poorly on MVS 3.8], while a combined usage of sprintf and
***        fwrite shows significantly better performance (though still
***        not satisfactorily) with a strong correlation between the
***        number of calls to sprintf and the performance. For that
***        reason the code was optimized to minimize the number of
***        sprintf calls to one per line as opposed to one per prime
***        which one would normally code.
***
*****
2  //PRIMES EXEC GCCCG,COPTS='-v -O3'
3  XXGCCCLG PROC SOUT='*',PDPPREF='PDPCLIB',INFILE='',
XX      COPTS='',LOPTS='',
XX COS1='-S -ansi -pedantic-errors',
XX COS2='-o dd:out -'
***
4  XXCOMP EXEC PGM=GCC,COND=(4,LT),
XX PARM='&COS1 &COPTS &COS2'
***
*** INCLUDE SHOULD HAVE YOUR OWN HEADERS ADDED
***
5  XXINCLUDE DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6  XXSYSINCL DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7  //COMP.SYSIN DD DATA,DLM=@@
X/SYSIN DD DSN=&INFILE,DISP=SHR
8  XXOUT DD DSN=&TEMP,DISP=(,PASS),UNIT=SYSALLDA,
XX      DCB=(LRECL=80,BLKSIZE=6160,RECFM=FB),
XX      SPACE=(6160,(500,500))
9  XXSYSPRINT DD SYSOUT=&SOUT
10 XXSYSTEM DD SYSOUT=&SOUT
***
11 XXASM EXEC PGM=IFX00,
XX      PARM='DECK,NOLIST',
XX      COND=(4,LT,COMP)
12 XXSYSLIB DD DSN=SYS1.MACLIB,DISP=SHR,DCB=BLKSIZE=32720
13 XX      DD DSN=&PDPPREF..MACLIB,DISP=SHR
14 XXSYSUT1 DD UNIT=SYSALLDA,SPACE=(CYL,(20,10))
15 XXSYSUT2 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
16 XXSYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
17 XXSYSPRINT DD SYSOUT=&SOUT
18 XXSYSLIN DD DUMMY
19 XXSYSGO DD DUMMY
20 XXSYSPUNCH DD DSN=&OBJSET,UNIT=SYSALLDA,SPACE=(80,(200,200)),
XX      DISP=(,PASS)

```

```
21  XXSYSIN      DD DSN=&&TEMP,DISP=(OLD,DELETE)
    ***
22  XXGO         EXEC PGM=LOADER,PARM='&LOPTS',
    XX          COND=((4,LT,COMP),(4,LT,ASM))
23  XXSYSLIN     DD DSN=&&OBJSET,DISP=(OLD,DELETE)
24  XXSYSLIB     DD DSN=&PDPPREF..NCALIB,DISP=SHR
25  XXSYSUT1     DD UNIT=SYSALLDA,SPACE=(CYL,(2,1))
26  XXSYSLOUT    DD SYSOUT=&SOUT
27  XXSYSPRINT   DD SYSOUT=&SOUT
28  XXSYSTEM     DD SYSOUT=&SOUT
29  //GO.SYSIN    DD *
    X/SYSIN      DD DUMMY
30  //GO.OUTPUT   DD SYSOUT=*,DCB=(RECFM=FBA,LRECL=161,BLKSIZE=32200)
```

STMT NO. MESSAGE

```
4 IEF653I SUBSTITUTION JCL - PARM='-S -ansi -pedantic-errors -v -O3 -o dd:out -'
5 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7 IEF653I SUBSTITUTION JCL - DSN=,DISP=SHR
9 IEF653I SUBSTITUTION JCL - SYSOUT=*
10 IEF653I SUBSTITUTION JCL - SYSOUT=*
13 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.MACLIB,DISP=SHR
17 IEF653I SUBSTITUTION JCL - SYSOUT=*
22 IEF653I SUBSTITUTION JCL - PGM=LOADER,PARM='',
24 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.NCALIB,DISP=SHR
26 IEF653I SUBSTITUTION JCL - SYSOUT=*
27 IEF653I SUBSTITUTION JCL - SYSOUT=*
28 IEF653I SUBSTITUTION JCL - SYSOUT=*
IEF236I ALLOC. FOR PRIMGCC COMP PRIMES
IEF237I 299 ALLOCATED TO INCLUDE
IEF237I 298 ALLOCATED TO SYS00026
IEF237I 299 ALLOCATED TO SYSINCL
IEF237I JES2 ALLOCATED TO SYSIN
IEF237I 290 ALLOCATED TO OUT
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO SYSTEM
IEF142I PRIMGCC COMP PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I PDPCLIB.INCLUDE KEPT *-----0
IEF285I VOL SER NOS= TK5002.
IEF285I SYS1.UCAT.TK5 KEPT *-----0
IEF285I VOL SER NOS= TK5001.
IEF285I PDPCLIB.INCLUDE KEPT *-----13
IEF285I VOL SER NOS= TK5002.
IEF285I JES2.JOB00013.SI0101 SYSIN
IEF285I SYS25186.T025007.RA000.PRIMGCC.TEMP PASSED *-----4
IEF285I VOL SER NOS= WORK01.
IEF285I JES2.JOB00013.S00103 SYSOUT
IEF285I JES2.JOB00013.S00104 SYSOUT
IEF373I STEP /COMP / START 25186.0250
IEF374I STEP /COMP / STOP 25186.0250 CPU 0MIN 01.87SEC SRB 0MIN 00.09SEC VIRT 4164K SYS 228K
*****
* 1. Jobstep of job: PRIMGCC Stepname: COMP Program name: GCC Executed on 05.07.25 from 02.50.07 to 02.50.09 *
* elapsed time 00:00:02,32 CPU-Identifier: PI5B Page-in: 0 *
* CPU time 00:00:01,96 Virtual Storage used: 4164K Page-out: 0 *
* corr. CPU: 00:00:01,96 CPU time has been corrected by 1 / 1,0 multiplier *
*
* I/O Operation *
* Number of records read via DD * or DD DATA: 85 *
* 299.....0 298.....0 299.....13 DMY.....0 290.....4 DMY.....0 DMY.....0 *
*
* Charge for step (w/o SYSOUT): 3,26 *
*****
IEF236I ALLOC. FOR PRIMGCC ASM PRIMES
IEF237I 390 ALLOCATED TO SYSLIB
IEF237I 299 ALLOCATED TO
IEF237I 298 ALLOCATED TO SYS00028
IEF237I 293 ALLOCATED TO SYSUT1
IEF237I 292 ALLOCATED TO SYSUT2
IEF237I 291 ALLOCATED TO SYSUT3
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY ALLOCATED TO SYSLIN
IEF237I DMY ALLOCATED TO SYSGO
IEF237I 291 ALLOCATED TO SYSPUNCH
IEF237I 290 ALLOCATED TO SYSIN
```

IEF142I PRIMGCC ASM PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS1.MACLIB	KEPT	*-----10
IEF285I	VOL SER NOS= TK5RES.		
IEF285I	PDPCLIB.MACLIB	KEPT	*-----7
IEF285I	VOL SER NOS= TK5002.		
IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
IEF285I	VOL SER NOS= TK5001.		
IEF285I	SYS25186.T025007.RA000.PRIMGCC.R0000001	DELETED	*-----28
IEF285I	VOL SER NOS= WORK04.		
IEF285I	SYS25186.T025007.RA000.PRIMGCC.R0000002	DELETED	*-----9
IEF285I	VOL SER NOS= WORK03.		
IEF285I	SYS25186.T025007.RA000.PRIMGCC.R0000003	DELETED	*-----8
IEF285I	VOL SER NOS= WORK02.		
IEF285I	JES2.JOB00013.S00105	SYSOUT	
IEF285I	SYS25186.T025007.RA000.PRIMGCC.OBJSET	PASSED	*-----32
IEF285I	VOL SER NOS= WORK02.		
IEF285I	SYS25186.T025007.RA000.PRIMGCC.TEMP	DELETED	*-----5
IEF285I	VOL SER NOS= WORK01.		

IEF373I STEP /ASM / START 25186.0250

IEF374I STEP /ASM / STOP 25186.0250 CPU 0MIN 00.14SEC SRB 0MIN 00.01SEC VIRT 2152K SYS 200K

* 2. Jobstep of job: PRIMGCC	Stepname: ASM	Program name: IFOX00	Executed on 05.07.25 from 02.50.09 to 02.50.09	*
* elapsed time 00:00:00,24		CPU-Identifier: PI5B	Page-in: 0	*
* CPU time 00:00:00,15		Virtual Storage used: 2152K	Page-out: 0	*
* corr. CPU: 00:00:00,15		CPU time has been corrected by 1 / 1,0 multiplier		*

* I/O Operation

* Number of records read via DD * or DD DATA: 0

* 390.....10 299.....7 298.....0 293.....28 292.....9 291.....8 DMY.....0 DMY.....0 DMY.....0 291.....32

* 290.....5

* Charge for step (w/o SYSOUT): 0,25

IEF236I ALLOC. FOR PRIMGCC GO PRIMES

IEF237I 291 ALLOCATED TO SYSLIN

IEF237I 299 ALLOCATED TO SYSLIB

IEF237I 298 ALLOCATED TO SYS00030

IEF237I 292 ALLOCATED TO SYSUT1

IEF237I JES2 ALLOCATED TO SYSLOUT

IEF237I JES2 ALLOCATED TO SYSPRINT

IEF237I JES2 ALLOCATED TO SYSTEM

IEF237I JES2 ALLOCATED TO SYSIN

IEF237I JES2 ALLOCATED TO OUTPUT

IEF142I PRIMGCC GO PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS25186.T025007.RA000.PRIMGCC.OBJSET	DELETED	*-----33
---------	---------------------------------------	---------	----------

IEF285I VOL SER NOS= WORK02.

IEF285I	PDPCLIB.NCALIB	KEPT	*-----124
---------	----------------	------	-----------

IEF285I VOL SER NOS= TK5002.

IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
---------	---------------	------	---------

IEF285I VOL SER NOS= TK5001.

IEF285I	SYS25186.T025007.RA000.PRIMGCC.R0000004	DELETED	*-----0
---------	---	---------	---------

IEF285I VOL SER NOS= WORK03.

IEF285I	JES2.JOB00013.S00106	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00013.S00107	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00013.S00108	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00013.SI0102	SYSIN	
---------	----------------------	-------	--

IEF285I	JES2.JOB00013.S00109	SYSOUT	
---------	----------------------	--------	--

IEF373I STEP /GO / START 25186.0250

IEF374I STEP /GO / STOP 25186.0250 CPU 0MIN 00.06SEC SRB 0MIN 00.01SEC VIRT 528K SYS 240K

* 3. Jobstep of job: PRIMGCC	Stepname: GO	Program name: LOADER	Executed on 05.07.25 from 02.50.09 to 02.50.09	*
------------------------------	--------------	----------------------	--	---

```
*      elapsed time 00:00:00,14      CPU-Identifier: PI5B      Page-in:      0      *
*      CPU time 00:00:00,07      Virtual Storage used: 528K      Page-out:      0      *
*      corr. CPU: 00:00:00,07      CPU time has been corrected by 1 / 1,0 multiplier      *
*
*      I/O Operation      *
*      Number of records read via DD * or DD DATA:      1      *
*      291.....33 299.....124 298.....0 292.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0      *
*
*      Charge for step (w/o SYSOUT):      0,11      *
*****
IEF375I JOB /PRIMGCC / START 25186.0250
IEF376I JOB /PRIMGCC / STOP 25186.0250 CPU      0MIN 02.07SEC SRB      0MIN 00.11SEC
```

Using built-in specs.

Configured with: ./configure --target=i370-ibm-mvspdp --enable-languages=c

Thread model: single

gcc version 3.2.3 MVS V8.5

cc1 -lang-c -std=c89 -v -iprefix ../lib/gcc-lib/i370/1.1/ -D__GNUC__=3 -D__GNUC_MINOR__=2 -D__GNUC_PATCHLEVEL__=3 -D__GXX_ABI_VERSION=1000

GNU CPP version 3.2.3 MVS V8.5 (cpplib) (370/MVS)

GNU C version 3.2.3 MVS V8.5 (mvs)

compiled by GNU C version 3.2.3 MVS V8.5.

#include "... " search starts here:

End of search list.

VS LOADER

OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=307200,NAME=**GO

TOTAL LENGTH	EBC0
ENTRY ADDRESS	AC0A0

2	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	
73	79	83	89	97	101	103	107	109	113	127	131	137	139	149	151	
179	181	191	193	197	199	211	223	227	229	233	239	241	251	257	263	
283	293	307	311	313	317	331	337	347	349	353	359	367	373	379	383	
419	421	431	433	439	443	449	457	461	463	467	479	487	491	499	503	
547	557	563	569	571	577	587	593	599	601	607	613	617	619	631	641	
661	673	677	683	691	701	709	719	727	733	739	743	751	757	761	769	
811	821	823	827	829	839	853	857	859	863	877	881	883	887	907	911	
947	953	967	971	977	983	991	997	1009	1013	1019	1021	1031	1033	1039	1049	1
1087	1091	1093	1097	1103	1109	1117	1123	1129	1151	1153	1163	1171	1181	1187	1193	1
1229	1231	1237	1249	1259	1277	1279	1283	1289	1291	1297	1301	1303	1307	1319	1321	1
1381	1399	1409	1423	1427	1429	1433	1439	1447	1451	1453	1459	1471	1481	1483	1487	1
1523	1531	1543	1549	1553	1559	1567	1571	1579	1583	1597	1601	1607	1609	1613	1619	1
1663	1667	1669	1693	1697	1699	1709	1721	1723	1733	1741	1747	1753	1759	1777	1783	1
1823	1831	1847	1861	1867	1871	1873	1877	1879	1889	1901	1907	1913	1931	1933	1949	1
1993	1997	1999														

303 primes up to 2000 found.

```

PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PPPPPPPPPP RRRRRRRRRR IIIIIIIIII MMM MMM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP PP PP RR RR II MM MM MM MM GG CC CC CC
PP PP PP RR RR II MM MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG CC CC CC
PPPPPPPPPP RRRRRRRRRR II MM MM MM GG GGGGG CC CC CC
PP PP RR RR II MM MM MM GG GGGG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR II MM MM MM GG GG CC CC CC
PP PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC
PP RR RR IIIIIIIIII MM MM GGGGGGGGGG CCCCCCCCCC CCCCCCCCCC

```

```

JJJJJJJJJ 11 333333333 EEEEEEEEEEE
JJJJJJJJJ 111 33333333333 EEEEEEEEEEE
JJ 1111 33 33 EE
JJ 11 33 EE
JJ 11 33 EE
JJ 11 3333 EEEEEEE
JJ 11 3333 EEEEEEE
JJ JJ 11 33 EE
JJ JJ 11 33 EE
JJ JJ 11 33 EE
JJJJJJJ 111111111 33333333333 EEEEEEEEEEE
JJJJJ 111111111 333333333 EEEEEEEEEEE

```

****E	END	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	END	E****
****E	END	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	END	E****
****E	END	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	END	E****
****E	END	JOB	13	PRIMGCC	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	13	END	E****

```

GGGGGGGGGG UU UU EEEEEEEEEEE SSSSSSSSSS TTTTTTTTTT 11 AAAAAAAAAA
GGGGGGGGGG UU UU EEEEEEEEEEE SSSSSSSSSS TTTTTTTTTT 111 AAAAAAAAAA
GG GG UU UU EE SS TT 1111 AA AA
GG UU UU EE SSS TT 11 AA AA
GG GG UU UU EEEEEEE SSSSSSSS TT 11 AAAAAAAAAA
GG GG UU UU EEEEEEE SSSSSSSS TT 11 AAAAAAAAAA
GG GG UU UU EE SSS TT 11 AA AA
GG GG UU UU EE SS SS TT 11 AA AA
GGGGGGGGGGG UUUUUUUUUUU EEEEEEEEEEE SSSSSSSSSS TT 11111111 AA AA
GGGGGGGGGGG UUUUUUUUUUU EEEEEEEEEEE SSSSSSSSSS TT 11111111 AA AA

```

```

JJJJJJJJJ 11 888888888 EEEEEEEEEEE
JJJJJJJJJ 111 88888888888 EEEEEEEEEEE
JJ 1111 88 88 EE
JJ 11 88 88 EE
JJ 11 88 88 EE
JJ 11 8888888 EEEEEEE
JJ 11 8888888 EEEEEEE
JJ 11 88 88 EE
JJ JJ 11 88 88 EE
JJ JJ 11 88 88 EE
JJJJJJJ 111111111 88888888888 EEEEEEEEEEE
JJJJJJ 111111111 888888888 EEEEEEEEEEE

```

****E	START	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	START	E****
****E	START	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	START	E****
****E	START	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	START	E****
****E	START	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	START	E****

J E S 2 J O B L O G

```
2.59.32 JOB  18 $HASP373 GUEST1A  STARTED - INIT  1 - CLASS A - SYS PI5B
2.59.32 JOB  18 IEF403I GUEST1A - STARTED - TIME=02.59.32
2.59.35 JOB  18 IEFACTRT - Stepname  Procstep  Program  Retcode
2.59.35 JOB  18 GUEST1A   PRIMES    COMP      GCC       RC= 0000
2.59.35 JOB  18 GUEST1A   PRIMES    ASM       IFOX00    RC= 0000
2.59.35 JOB  18 GUEST1A   PRIMES    GO        LOADER    RC= 0000
2.59.35 JOB  18 IEF404I GUEST1A - ENDED - TIME=02.59.35
2.59.35 JOB  18 $HASP395 GUEST1A  ENDED
```

----- JES2 JOB STATISTICS -----

05 JUL 25 JOB EXECUTION DATE

119 CARDS READ

251 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.04 MINUTES EXECUTION TIME

```

1  //GUEST1A JOB (PRIMGCC),                                JOB 18
//      'Eratosthenes Sieve',
//      CLASS=A,
//      MSGCLASS=E,
//      REGION=8M,TIME=1440,
//      MSGLEVEL=(1,1),
//      USER=GUEST1,PASSWORD=          GENERATED BY IKJEFF10
*****
***
*** Name: SYS2.JCLLIB(PRIMGCC)
***
*** Desc: Sieve of Eratosthenes programmed in C, optimized for use
***        with GNU C version 3.2.3 MVS V8.5, as ported by Paul Edwards.
***
***        All prime numbers up to the value entered via
***        //G0.SYSIN DD are computed.
***
***        GCC's printf integer to string conversion (%d) performs
***        poorly on MVS 3.8], while a combined usage of sprintf and
***        fwrite shows significantly better performance (though still
***        not satisfactorily) with a strong correlation between the
***        number of calls to sprintf and the performance. For that
***        reason the code was optimized to minimize the number of
***        sprintf calls to one per line as opposed to one per prime
***        which one would normally code.
***
*****
2  //PRIMES EXEC GCCCG,COPTS='-v -O3'
3  XXGCCCLG PROC SOUT='*',PDPPREF='PDPCLIB',INFILE='',
XX      COPTS='',LOPTS='',
XX COS1='-S -ansi -pedantic-errors',
XX COS2='-o dd:out -'
***
4  XXCOMP EXEC PGM=GCC,COND=(4,LT),
XX PARM='&COS1 &COPTS &COS2'
***
*** INCLUDE SHOULD HAVE YOUR OWN HEADERS ADDED
***
5  XXINCLUDE DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6  XXSYSINCL DD DSN=&PDPPREF..INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7  //COMP.SYSIN DD DATA,DLM=@@
X/SYSIN DD DSN=&INFILE,DISP=SHR
8  XXOUT DD DSN=&TEMP,DISP=(,PASS),UNIT=SYSALLDA,
XX      DCB=(LRECL=80,BLKSIZE=6160,RECFM=FB),
XX      SPACE=(6160,(500,500))
9  XXSYSPRINT DD SYSOUT=&SOUT
10 XXSYSTEM DD SYSOUT=&SOUT
***
11 XXASM EXEC PGM=IFX00,
XX      PARM='DECK,NOLIST',
XX      COND=(4,LT,COMP)
12 XXSYSLIB DD DSN=SYS1.MACLIB,DISP=SHR,DCB=BLKSIZE=32720
13 XX      DD DSN=&PDPPREF..MACLIB,DISP=SHR
14 XXSYSUT1 DD UNIT=SYSALLDA,SPACE=(CYL,(20,10))
15 XXSYSUT2 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
16 XXSYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
17 XXSYSPRINT DD SYSOUT=&SOUT
18 XXSYSLIN DD DUMMY
19 XXSYSGO DD DUMMY
20 XXSYSPPUNCH DD DSN=&OBJSET,UNIT=SYSALLDA,SPACE=(80,(200,200)),
XX      DISP=(,PASS)

```

```
21  XXSYSIN      DD DSN=&&TEMP,DISP=(OLD,DELETE)
    ***
22  XXGO         EXEC PGM=LOADER,PARM='&LOPTS',
    XX          COND=((4,LT,COMP),(4,LT,ASM))
23  XXSYSLIN     DD DSN=&&OBJSET,DISP=(OLD,DELETE)
24  XXSYSLIB     DD DSN=&PDPPREF..NCALIB,DISP=SHR
25  XXSYSUT1     DD UNIT=SYSALLDA,SPACE=(CYL,(2,1))
26  XXSYSLOUT    DD SYSOUT=&SOUT
27  XXSYSPRINT   DD SYSOUT=&SOUT
28  XXSYSTEM     DD SYSOUT=&SOUT
29  //GO.SYSIN    DD *
    X/SYSIN      DD DUMMY
30  //GO.OUTPUT   DD SYSOUT=*,DCB=(RECFM=FBA,LRECL=161,BLKSIZE=32200)
```

STMT NO. MESSAGE

```
4 IEF653I SUBSTITUTION JCL - PARM='-S -ansi -pedantic-errors -v -O3 -o dd:out -'
5 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
6 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.INCLUDE,DISP=SHR,DCB=BLKSIZE=32720
7 IEF653I SUBSTITUTION JCL - DSN=,DISP=SHR
9 IEF653I SUBSTITUTION JCL - SYSOUT=*
10 IEF653I SUBSTITUTION JCL - SYSOUT=*
13 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.MACLIB,DISP=SHR
17 IEF653I SUBSTITUTION JCL - SYSOUT=*
22 IEF653I SUBSTITUTION JCL - PGM=LOADER,PARM='',
24 IEF653I SUBSTITUTION JCL - DSN=PDPCLIB.NCALIB,DISP=SHR
26 IEF653I SUBSTITUTION JCL - SYSOUT=*
27 IEF653I SUBSTITUTION JCL - SYSOUT=*
28 IEF653I SUBSTITUTION JCL - SYSOUT=*
IEF236I ALLOC. FOR GUEST1A COMP PRIMES
IEF237I 299 ALLOCATED TO INCLUDE
IEF237I 298 ALLOCATED TO SYS00056
IEF237I 299 ALLOCATED TO SYSINCL
IEF237I JES2 ALLOCATED TO SYSIN
IEF237I 290 ALLOCATED TO OUT
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO SYSTEM
IEF142I GUEST1A COMP PRIMES - STEP WAS EXECUTED - COND CODE 0000
IEF285I PDPCLIB.INCLUDE KEPT *-----0
IEF285I VOL SER NOS= TK5002.
IEF285I SYS1.UCAT.TK5 KEPT *-----0
IEF285I VOL SER NOS= TK5001.
IEF285I PDPCLIB.INCLUDE KEPT *-----13
IEF285I VOL SER NOS= TK5002.
IEF285I JES2.JOB00018.SI0101 SYSIN
IEF285I SYS25186.T025932.RA000.GUEST1A.TEMP PASSED *-----4
IEF285I VOL SER NOS= WORK01.
IEF285I JES2.JOB00018.S00103 SYSOUT
IEF285I JES2.JOB00018.S00104 SYSOUT
IEF373I STEP /COMP / START 25186.0259
IEF374I STEP /COMP / STOP 25186.0259 CPU 0MIN 01.84SEC SRB 0MIN 00.09SEC VIRT 4164K SYS 232K
*****
* 1. Jobstep of job: GUEST1A Stepname: COMP Program name: GCC Executed on 05.07.25 from 02.59.32 to 02.59.35 *
* elapsed time 00:00:02,28 CPU-Identifier: PI5B Page-in: 1 *
* CPU time 00:00:01,93 Virtual Storage used: 4164K Page-out: 0 *
* corr. CPU: 00:00:01,93 CPU time has been corrected by 1 / 1,0 multiplier *
*
* I/O Operation *
* Number of records read via DD * or DD DATA: 85 *
* 299.....0 298.....0 299.....13 DMY.....0 290.....4 DMY.....0 DMY.....0 *
*
* Charge for step (w/o SYSOUT): 3,21 *
*****
IEF236I ALLOC. FOR GUEST1A ASM PRIMES
IEF237I 390 ALLOCATED TO SYSLIB
IEF237I 299 ALLOCATED TO
IEF237I 298 ALLOCATED TO SYS00058
IEF237I 292 ALLOCATED TO SYSUT1
IEF237I 293 ALLOCATED TO SYSUT2
IEF237I 291 ALLOCATED TO SYSUT3
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY ALLOCATED TO SYSLIN
IEF237I DMY ALLOCATED TO SYSGO
IEF237I 292 ALLOCATED TO SYSPUNCH
IEF237I 290 ALLOCATED TO SYSIN
```

IEF142I GUEST1A ASM PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS1.MACLIB	KEPT	*-----10
IEF285I	VOL SER NOS= TK5RES.		
IEF285I	PDPCLIB.MACLIB	KEPT	*-----7
IEF285I	VOL SER NOS= TK5002.		
IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
IEF285I	VOL SER NOS= TK5001.		
IEF285I	SYS25186.T025932.RA000.GUEST1A.R0000001	DELETED	*-----28
IEF285I	VOL SER NOS= WORK03.		
IEF285I	SYS25186.T025932.RA000.GUEST1A.R0000002	DELETED	*-----9
IEF285I	VOL SER NOS= WORK04.		
IEF285I	SYS25186.T025932.RA000.GUEST1A.R0000003	DELETED	*-----8
IEF285I	VOL SER NOS= WORK02.		
IEF285I	JES2.JOB00018.S00105	SYSOUT	
IEF285I	SYS25186.T025932.RA000.GUEST1A.OBJSET	PASSED	*-----32
IEF285I	VOL SER NOS= WORK03.		
IEF285I	SYS25186.T025932.RA000.GUEST1A.TEMP	DELETED	*-----5
IEF285I	VOL SER NOS= WORK01.		

IEF373I STEP /ASM / START 25186.0259

IEF374I STEP /ASM / STOP 25186.0259 CPU 0MIN 00.14SEC SRB 0MIN 00.01SEC VIRT 2152K SYS 200K

*	2. Jobstep of job: GUEST1A	Stepname: ASM	Program name: IFOX00	Executed on 05.07.25 from 02.59.35 to 02.59.35	*
*	elapsed time	00:00:00,28	CPU-Identifier: PI5B	Page-in: 0	*
*	CPU time	00:00:00,15	Virtual Storage used: 2152K	Page-out: 0	*
*	corr. CPU:	00:00:00,15	CPU time has been corrected by 1 / 1,0 multiplier		*

* I/O Operation

* Number of records read via DD * or DD DATA: 0

* 390.....10 299.....7 298.....0 292.....28 293.....9 291.....8 DMY.....0 DMY.....0 DMY.....0 292.....32

* 290.....5

* Charge for step (w/o SYSOUT): 0,25

IEF236I ALLOC. FOR GUEST1A GO PRIMES

IEF237I 292 ALLOCATED TO SYSLIN

IEF237I 299 ALLOCATED TO SYSLIB

IEF237I 298 ALLOCATED TO SYS00060

IEF237I 290 ALLOCATED TO SYSUT1

IEF237I JES2 ALLOCATED TO SYSLOUT

IEF237I JES2 ALLOCATED TO SYSPRINT

IEF237I JES2 ALLOCATED TO SYSTEM

IEF237I JES2 ALLOCATED TO SYSIN

IEF237I JES2 ALLOCATED TO OUTPUT

IEF142I GUEST1A GO PRIMES - STEP WAS EXECUTED - COND CODE 0000

IEF285I	SYS25186.T025932.RA000.GUEST1A.OBJSET	DELETED	*-----33
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IEF285I VOL SER NOS= WORK03.

IEF285I	PDPCLIB.NCALIB	KEPT	*-----124
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IEF285I VOL SER NOS= TK5002.

IEF285I	SYS1.UCAT.TK5	KEPT	*-----0
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IEF285I VOL SER NOS= TK5001.

IEF285I	SYS25186.T025932.RA000.GUEST1A.R0000004	DELETED	*-----0
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IEF285I VOL SER NOS= WORK01.

IEF285I	JES2.JOB00018.S00106	SYSOUT	
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IEF285I	JES2.JOB00018.S00107	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00018.S00108	SYSOUT	
---------	----------------------	--------	--

IEF285I	JES2.JOB00018.SI0102	SYSIN	
---------	----------------------	-------	--

IEF285I	JES2.JOB00018.S00109	SYSOUT	
---------	----------------------	--------	--

IEF373I STEP /GO / START 25186.0259

IEF374I STEP /GO / STOP 25186.0259 CPU 0MIN 00.06SEC SRB 0MIN 00.01SEC VIRT 528K SYS 244K

*	3. Jobstep of job: GUEST1A	Stepname: GO	Program name: LOADER	Executed on 05.07.25 from 02.59.35 to 02.59.35	*
---	----------------------------	--------------	----------------------	--	---

```
*      elapsed time 00:00:00,14      CPU-Identifier: PI5B      Page-in:      0      *
*      CPU time 00:00:00,07      Virtual Storage used: 528K      Page-out:      0      *
*      corr. CPU: 00:00:00,07      CPU time has been corrected by 1 / 1,0 multiplier      *
*
*      I/O Operation      *
*      Number of records read via DD * or DD DATA:      1      *
*      292.....33 299.....124 298.....0 290.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0 DMY.....0      *
*
*      Charge for step (w/o SYSOUT):      0,11      *
*****
IEF375I JOB /GUEST1A / START 25186.0259
IEF376I JOB /GUEST1A / STOP 25186.0259 CPU      0MIN 02.04SEC SRB      0MIN 00.11SEC
```

Using built-in specs.

Configured with: ./configure --target=i370-ibm-mvspdp --enable-languages=c

Thread model: single

gcc version 3.2.3 MVS V8.5

cc1 -lang-c -std=c89 -v -iprefix ../lib/gcc-lib/i370/1.1/ -D__GNUC__=3 -D__GNUC_MINOR__=2 -D__GNUC_PATCHLEVEL__=3 -D__GXX_ABI_VERSION=1000

GNU CPP version 3.2.3 MVS V8.5 (cpplib) (370/MVS)

GNU C version 3.2.3 MVS V8.5 (mvs)

compiled by GNU C version 3.2.3 MVS V8.5.

#include "... " search starts here:

End of search list.

VS LOADER

OPTIONS USED - PRINT,NOMAP,NOLET,CALL,RES,NOTERM,SIZE=307200,NAME=**GO

TOTAL LENGTH	EBC0
ENTRY ADDRESS	AC0A0

2	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	
73	79	83	89	97	101	103	107	109	113	127	131	137	139	149	151	
179	181	191	193	197	199	211	223	227	229	233	239	241	251	257	263	
283	293	307	311	313	317	331	337	347	349	353	359	367	373	379	383	
419	421	431	433	439	443	449	457	461	463	467	479	487	491	499	503	
547	557	563	569	571	577	587	593	599	601	607	613	617	619	631	641	
661	673	677	683	691	701	709	719	727	733	739	743	751	757	761	769	
811	821	823	827	829	839	853	857	859	863	877	881	883	887	907	911	
947	953	967	971	977	983	991	997	1009	1013	1019	1021	1031	1033	1039	1049	1
1087	1091	1093	1097	1103	1109	1117	1123	1129	1151	1153	1163	1171	1181	1187	1193	1
1229	1231	1237	1249	1259	1277	1279	1283	1289	1291	1297	1301	1303	1307	1319	1321	1
1381	1399	1409	1423	1427	1429	1433	1439	1447	1451	1453	1459	1471	1481	1483	1487	1
1523	1531	1543	1549	1553	1559	1567	1571	1579	1583	1597	1601	1607	1609	1613	1619	1
1663	1667	1669	1693	1697	1699	1709	1721	1723	1733	1741	1747	1753	1759	1777	1783	1
1823	1831	1847	1861	1867	1871	1873	1877	1879	1889	1901	1907	1913	1931	1933	1949	1
1993	1997	1999														

303 primes up to 2000 found.

```

GGGGGGGGGG UU UU EEEEEEEEEEE SSSSSSSSSS TTTTTTTTTT 11 AAAAAAAAAA
GGGGGGGGGG UU UU EEEEEEEEEEE SSSSSSSSSS TTTTTTTTTT 111 AAAAAAAAAA
GG GG UU UU EE SS TT 1111 AA AA
GG UU UU EE SS TT 11 AA AA
GG GG UU UU EEEEEEE SSSSSSSS TT 11 AA AA
GG GG UU UU EEEEEEE SSSSSSSS TT 11 AAAAAAAAAA
GG GG UU UU EE EEEEEEE SSSSSSSS TT 11 AAAAAAAAAA
GG GG UU UU EE SS SS TT 11 AA AA
GG GG UU UU EE SS SS TT 11 AA AA
GGGGGGGGGGG UUUUUUUUUUU EEEEEEEEEEE SSSSSSSSSS TT 11111111 AA AA
GGGGGGGGGGG UUUUUUUUUUU EEEEEEEEEEE SSSSSSSSSS TT 11111111 AA AA

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JJJJJJJJJ 11 888888888 EEEEEEEEEEE
JJJJJJJJJ 111 88888888888 EEEEEEEEEEE
JJ 1111 88 88 EE
JJ 11 88 88 EE
JJ 11 88 88 EE
JJ 11 8888888 EEEEEEE
JJ 11 8888888 EEEEEEE
JJ 11 88 88 EE
JJ JJ 11 88 88 EE
JJ JJ 11 88 88 EE
JJJJJJJ 111111111 88888888888 EEEEEEEEEEE
JJJJJJ 111111111 888888888 EEEEEEEEEEE

```

****E	END	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	END	E****
****E	END	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	END	E****
****E	END	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	END	E****
****E	END	JOB	18	GUEST1A	Eratosthenes Sieve	ROOM	3.06.00	AM	05	JUL	25	PRINTER4	SYS	PI5B	JOB	18	END	E****