

```

char * nData, *nRows, *nCols;
int genPipe[2], displayPipe[2];

```

No globals

```

void main (int argc, char *argv[])

```

```

{

```

```

    nData = argv[0];

```

```

    numRows = argv[1];

```

```

    nCols = argv[2];

```

```

    pipe (genPipe);

```

```

    pipe (displayPipe);

```

```

    int dispPid = fork();

```

```

    if (dispPid == 0) // Display Child

```

```

    {

```

```

        close (genPipe[0]);

```

```

        close (genPipe[1]);

```

```

        close (displayPipe[1]);

```

```

        dup2 (displayPipe[0], 0);

```

```

        exec ("./display", numRows, nCols);

```

```

    }

```

```

    int genPid = fork();

```

```

    if (genPid == 0) // gen child

```

```

    {

```

```

        close (displayPipe[0]);

```

```

        close (displayPipe[1]);

```

```

        close (genPipe[0]);

```

```

        dup2 (genPipe[1], 1);

```

```

        exec ("./Calc", nData);

```

```

    }

```

```

    close (genPipe[1]);

```

```

    close (displayPipe[0]);

```

```

    return 0;
}

```

check returns

```

if (dispPid < 0) {
    perror();
    exit(-1);
}

```

```

close (displayPipe[0]);

```

NULL

```

error message
exit(-1);

```

```

if < 0, error & exit

```

0 read 1 write

```

close (genPipe[1]);

```

NULL

```

error & exit

```