

```
// Yellow high-lite below marks the comment marks &/or lines that are to be removed
```

```
/* Author(s): Please put your student name(s) & section here.
```

```
*
```

```
* This is a lab9.c the csc60mshell
```

```
* This program serves as a skeleton for doing lab 9, 10, and 11.
```

```
* Student is required to use this program to build a mini shell
```

```
* using the specification as documented in directions.
```

```
* Date: Spring 2018
```

```
*/
```

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#include <sys/types.h>
```

```
#include <sys/wait.h>
```

```
#include <unistd.h>
```

```
#include <fcntl.h>
```

```
#include <errno.h>
```

```
#define MAXLINE 80
```

```
#define MAXARGS 20
```

```
#define MAX_PATH_LENGTH 50
```

```
#define TRUE 1
```

```
/* function prototypes */
```

```
int parseline(char *cmdline, char **argv);
```

```
//The two functions below will be needed in lab10.
```

```
//Leave them here to be used later.
```

```
/* void process_input(int argc, char **argv); */
```

```
/* void handle_redir(int count, char *argv[]); */
```

```
/* ----- */
```

```
/*          The main program starts here          */
```

```
/* ----- */
```

```
int main(void)
```

```
{
```

```
    char cmdline[MAXLINE];
```

```
    char *argv[MAXARGS];
```

```
    int argc;
```

```
    int status;
```

```
    pid_t pid;
```

```
    /* Loop forever to wait and process commands */
```

```
    while (TRUE) {
```

```
        /* Print your shell name: csc60mshell (m for mini shell) */
```

```
        printf("FillInThisSpace> ");
```

```

/* Read the command line */
fgets(cmdline, MAXLINE, stdin);

/* Call parseline to build argc/argv */

/* If user hits enter key without a command, continue to loop */
/* again at the beginning */
/* Hint: if argc is zero, no command declared */
/* Hint: look up for the keyword "continue" in C */

/* Handle build-in command: exit, pwd, or cd */
/* Put the rest of your code here */

//.....IGNORE.....
// /* Else, fork off a process */
// else {
//     pid = fork();
//     switch(pid)
//     {
//     case -1:
//         perror("Shell Program fork error");
//         exit(EXIT_FAILURE);
//     case 0:
//         /* I am child process. I will execute the command, */
//         /* and call: execvp */
//         process_input(argc, argv);
//         break;
//     default:
//         /* I am parent process */
//         if (wait(&status) == -1)
//             perror("Parent Process error");
//         else
//             printf("Child returned status: %d\n",status);
//         break;
//     } /* end of the switch */
// }
//...end of the IGNORE above.....
} /* end of the if-else-if */
} /* end of the while */
} /* end of main */

/* ----- */
/*      parseline      */
/* ----- */
/* parse input line into argc/argv format */

int parseline(char *cmdline, char **argv)
{

```

```

int count = 0;
char *separator = " \n\t"; /* Includes space, Enter, Tab */

/* strtok searches for the characters listed in separator */
argv[count] = strtok(cmdline, separator);

while ((argv[count] != NULL) && (count+1 < MAXARGS))
    argv[++count] = strtok((char *) 0, separator);

return count;
}
/* ----- */
/*      process_input      */
/* ----- */
void process_input(int argc, char **argv) {

    /* Step 1: Call handle_redir to deal with operators: */
    /* <, or >, or both */

    /* Step 2: perform system call execvp to execute command */
    /* Hint: Please be sure to review execvp.c sample program */
    The exec call goes here

    /* if (..... == -1) { */
    /*     fprintf(stderr, "Error on the exec call\n"); */
    /*     _exit(EXIT_FAILURE); */
    /* } */

}
/* ----- */
void handle_redir(int count, char *argv[])

// code goes here
/* ----- */

```