CSE 344 System Programming

HW-1 Report

Name: Furkan Sergen Dayıoğlu

Student Number: 121044015

In this homework;

First I created a structure which is called search_t.

```c
struct search_t{
    char* filename;
    int size;
    char type;
    char* permissions;
    int link_count;
};
```

As you can see, the attributes of the structure represent each parameter that asked from us in order to check to find files.

```c
/*usage function*/
void print_usage();

/* file control functions */
int filename_checker(char*filename,char*regex);
int size_checker(int filesize,int expected_size);
int type_checker(mode_t type, char expected_type);
int permission_checker(mode_t permissions,char*expected_permissions);
int link_count_checker(int link_count,int expected_link_count);
int isFileOK(char*filename,char*path,struct search_t* properties);

/* helper functions */
int path_level_count(char*path);
void print_file(char*path,int level,int count);



/* traversal function*/
int directory_traversal(char*path,struct search_t* file, int level);
```

I declared this functions.

File control functions, basically checks each parameter asked from us. If they are correct.

And isFileOK(…) function combines them.

Directory traversal function , recursively traverse directories. It starts from path we get from commandline .

Print_file function prints the file tree if the file that read in directory traversal function is ok.