Q 1.) 1. Write C Program to implement the following UNIX commands

(A) grep

(B) ls

Solution - A

```
#include<stdio.h>
#include<string.h>
int main()
{
   char fn[10],pat[10],temp[200];
   FILE *fp;
   printf("Enter file name\n");
   scanf("%s",fn);
   printf("Enter pattern to be searched\n");
   scanf("%s",pat);
   fp=fopen(fn,"r");
   while(!feof(fp)){
      fgets(temp,1000,fp);
      if(strstr(temp,pat))
         printf("%s",temp);
   }
   fclose(fp);
}
```

Output:

```
anand@DESKTOP-NK1DJIT MINGW64 /e/sem5labs/os_lab/lab 2/assignment (master)
$ gcc grep.c

anand@DESKTOP-NK1DJIT MINGW64 /e/sem5labs/os_lab/lab 2/assignment (master)
$ ./a.exe
Enter file name
grep.c
Enter pattern to be searched
main
int main()
```

Solution - B

```
#include<stdio.h>

#include<string.h>

#include<stdlib.h>

#include<dirent.h>

int main(int argc,char **argv)

{

        struct dirent **namelist;

        int n;

        if(argc < 1)

        {

                exit(EXIT_FAILURE);

        }

        else if (argc == 1)

        {

                n=scandir(".",&namelist,NULL,alphasort);

        }
```

```
        else
        {
                n = scandir(argv[1], &namelist, NULL, alphasort);
        }
        if(n < 0)
        {
                perror("scandir");
                exit(EXIT_FAILURE);
        }
        else
        {
                while (n--)
                {
                        printf("%s\n",namelist[n]->d_name);
                        free(namelist[n]);
                }
                free(namelist);
        }
        exit(EXIT_SUCCESS);
}
```

Output: