**ASSIGNMENT#1**

**WAQAS ASHIQ**

**BCS-FA11-201**

**SECTION-C**

**SYSTEM PROGRAMMING**

**TO:**

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**HEADER:**

#include<stdio.h>

#include<stdlib.h>

struct student{

int id;

char name[25];

float cgpa;

short int age;

struct student \*next;

};

struct student \*start;

struct student \*cur;

**MAIN:**

#include"Header.h"

void main(){

linklist();

}

**LINKLIST:**

#include "Header.h"

void linklist()

{

start=(struct student \*)malloc(sizeof(struct student));

cur=start;

int ter=0;

printf("\nEnter -1 to terminate the entries and 1 to continue:");

scanf("%d",&ter);

while(ter!=-1){

printf("Enter the name of student: ");

scanf("%s",cur->name);

printf("Enter the id of student: ");

scanf("%d",&cur->id);

printf("Enter the cgpa of student: ");

scanf("%f",&cur->cgpa);

printf("Enter the age of student: ");

scanf("%hd",&cur->age);

cur->next= (struct student \*)malloc(sizeof(struct student));

cur = cur->next;

cur->next=NULL;

printf("\nEnter -1 to terminate the entries:");

scanf("%d",&ter);

}

save();

}

**SAVE:**

#include"Header.h"

void save()

{

cur=start;

FILE \*cfPtr;

if ( ( cfPtr=fopen( "mydata.txt","w" ) ) == NULL )

{

printf( "Failed to open the requested File....\n" );

}

else

{

fprintf( cfPtr,"ID\t\tName\t\t\tCgpa\t\tAge");

printf("ID\t\tName\t\t\tCgpa\t\tAge");

while(cur->next!=NULL){

fprintf( cfPtr,"\n%d%18s%23.2f%16hd",cur->id,cur->name,cur->cgpa,cur->age);

printf( "\n\n%d%18s%23.2f%16hd",cur->id,cur->name,cur->cgpa,cur->age );

printf( "\n\n" );

cur=cur->next;}

}

fclose( cfPtr );

}

**MAKEFILE:**

myfile: main.o libassign1.a save.o

gcc -o myfile main.o linklist.o save.o

libassign1.a: linklist.o

ar cr libassign1.a linklist.o

linklist.o: linklist.c Header.h

gcc -c linklist.c

main.o: main.c Header.h

gcc -c main.csave.o: save.c Header.h

gcc -c save.c