Assignment- 4

Question: create a structure in c program to represent ece a student data like student name , roll no. , gender

1 create a text file using a c program and write the following data

2 one line about yourself

3 append file data with file checksum

4 write the struct data to file

5 append table of numbers in the file from 2 to 50

Answer:

(1)

```
#include <stdio.h>
void main(){
    FILE *file=fopen("Assignment-3(1).txt","w");
    fprintf(file,"Hello I am Abhinav Singh and I am pursuing my B.Tech form Faculty Of Technology, Delhi University.");
    fclose(file);
}
```

(2)

```c
#include <stdio.h>

struct student{
    char name[50];
    int age;
    float cgpa;
};

void main(){

    struct student student1;

    FILE*fp=fopen("StructureData.txt","w");

    printf("Student Name: ");
    fgets(student1.name,sizeof(student1.name),stdin);

    printf("Student Age: ");
    scanf("%d",&student1.age);

    printf("Student cgpa: ");
    scanf("%f",&student1.cgpa);

    fprintf(fp,"name: %s\n age: %d\n cgpa: %f\n", student1.name,student1.age,student1.cgpa);

    fclose(fp);
}
```

(3)

```c
#include <stdio.h>

struct student{
    char name[50];
    int age;
    float cgpa;
};
int calculateChecksum(const char *data){
    int Checksum=0;
    while(*data){
        Checksum += *data++;
    }
    return Checksum;
}
void main(){
    struct student student1;

    FILE*fp=fopen("StructureData1.txt","w");

    printf("Student Name: ");
    fgets(student1.name,sizeof(student1.name),stdin);

    printf("Student Age: ");
    scanf("%d",&student1.age);

    printf("Student cgpa: ");
    scanf("%f",&student1.cgpa);

    fprintf(fp,"name: %s\n age: %d\n cgpa: %f\n", student1.name,student1.age,student1.cgpa);

    int Checksum=calculateChecksum(student1.name);
    fprintf(fp,"Checksum: %d\n",Checksum);

    fclose(fp);
}
```

(4)

```c
#include <stdio.h>


void main(){
    FILE *file=fopen("Assignment-3(2).txt", "w");
    fprintf(file, "Table Of Numbers From 2 To 50: \n");
    for (int i=2; i<=50; i++){
        fprintf(file,"Table for %d:\n",i);
        for(int j=1;j<=10;j++){
            fprintf(file,"%d x %d = %d\n", i,j,i*j);
        }
    }
    fclose(file);
}
```