

Github repository: https://github.com/fekhan/c_inline_task

Question # 1

Console Output:

```
farman@farman-virtual-machine:~/CDP/R1/c_inline$ gedit structures.c
farman@farman-virtual-machine:~/CDP/R1/c_inline$ gcc structures.c -o structures
farman@farman-virtual-machine:~/CDP/R1/c_inline$ ls
structures  structures.c
farman@farman-virtual-machine:~/CDP/R1/c_inline$ ./structures
Enter student name: Farman
Enter student ID: 456
Enter student age: 29

Student Information:
Name: Farman
ID: 456
Age: 29
farman@farman-virtual-machine:~/CDP/R1/c_inline$
```

Code:

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

// Structure to represent a student
struct Student {
    char name[50]; // Array to store student's name
    int id;
    int age;
};

int main() {
    struct Student student; // Create a structure variable

    // Get student information from the user
    printf("Enter student name: ");
    fgets(student.name, 50, stdin);
    student.name[strcspn(student.name, "\n")] = '\0'; // Remove trailing
    newline, if any

    printf("Enter student ID: ");
    scanf("%d", &student.id);

    printf("Enter student age: ");
    scanf("%d", &student.age);

    // Print the stored student information
    printf("\nStudent Information:\n");
    printf("Name: %s\n", student.name);
    printf("ID: %d\n", student.id);
    printf("Age: %d\n", student.age);

    return 0;
}
```

Question # 2

Console Output:

```
farman@farman-virtual-machine:~/CDP/R1/c_inline$ gedit static_inline.c
farman@farman-virtual-machine:~/CDP/R1/c_inline$ gcc static_inline.c -o static_inline
farman@farman-virtual-machine:~/CDP/R1/c_inline$ ./static_inline
The cube of 5 is 125
farman@farman-virtual-machine:~/CDP/R1/c_inline$ █
```

Code:

```
#include <stdio.h>

// Static inline function to calculate the cube of a number
static inline int cube(int num) {
    return num * num * num;
}

int main() {
    int x = 5;
    int result = cube(x);

    printf("The cube of %d is %d\n", x, result);

    return 0;
}
```