Question: 1

`Employee Salary Classification` `Scenario:`

A company wants to `classify its employees' salaries`
based on their earnings. Given the salary of `N` employees,
write a program to categorize them as:
- `Low income`: Salary < 30,000
- `Middle income`: Salary between 30,000 and 70,000
- `High income`: Salary > 70,000

```c
#include <stdio.h>
int main()
{
    int n,i,sal,low=0,high=0,mid=0;
    printf("Enter the number of employees:\n");
    scanf("%d",&n);
    printf("Enter the salary of each employee:\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&sal);
    }
    if(sal<30000)
    {
        low++;
    }
    else if(sal>30000&&sal<=70000)
    {
        mid++;
    }
    else
    {
        high++;
    }
    printf("Low income :%d\n",low);
    printf("Middle class:%d\n",mid);
    printf("High class:%d\n",high);
    return 0;
}
```

Enter the number of employees:
3
Enter the salary of each employee:
10000
45000
70000
Low income :0
Middle class:1
High class:0

`2. Electricity Bill Calculation`
`Scenario:`
A power company charges customers based on their `electricity consumption`:
- `First 100 units`: ₹2 per unit
- `Next 100 units`: ₹3 per unit
- `Beyond 200 units`: ₹5 per unit

Write a program that calculates the `total electricity bill` for `N` customers.

```c
#include <stdio.h>

int main()
{
    int n, units;
    float con = 0.0, tot;

    printf("Enter the number of customers:\n");
    scanf("%d", &n);

    for (int i = 1; i <= n; i++)
    {
        printf("Enter the units consumed for customer %d:\n", i);
        scanf("%d", &units);

        con = 0.0;

        if (units <= 100) {
            con += units * 2;
        }
        else if (units > 100 && units <= 200) {
            con += (100 * 2) + ((units - 100) * 3);
        }
```

```
        else {
            con += (100 * 2) + (100 * 3) + ((units - 200) * 5);
        }

        tot = con;

        printf("Total amount for customer %d:%.2f\n", i, tot);
    }
```

Enter the number of customers:
3
Enter the units consumed for customer 1:
200
Total amount for customer 1:500.00
Enter the units consumed for customer 2:
900
Total amount for customer 2:4000.00
Enter the units consumed for customer 3:
400
Total amount for customer 3:1500.00

`3. Student Grading System`
`Scenario:`
A university assigns grades based on `students' total marks` out of 100:
- `90-100`: Grade A
- `80-89`: Grade B
- `70-79`: Grade C
- `60-69`: Grade D
- `Below 60`: Grade F

Write a program to `process multiple students' scores` and display their grades.

```c
#include<stdio.h>
int main() {
    int n, marks;

    printf("Enter the number of students: ");
    scanf("%d", &n);

    for (int i = 0; i < n; i++) {
```

```
        printf("Enter marks for student %d: ", i + 1);
        scanf("%d", &marks);

        if (marks >= 90 && marks <= 100)
            printf("Grade A\n");
        else if (marks >= 80 && marks < 90)
            printf("Grade B\n");
        else if (marks >= 70 && marks < 80)
            printf("Grade C\n");
        else if (marks >= 60 && marks < 70)
            printf("Grade D\n");
        else
            printf("Grade F\n");
    }


    return 0;
}
```

Enter the number of students: 3
Enter marks for student 1: 3
Grade F
Enter marks for student 2: 34
Grade F
Enter marks for student 3: 99
Grade A