Week 1

Q1. WAP to print Basic Information.

Code:

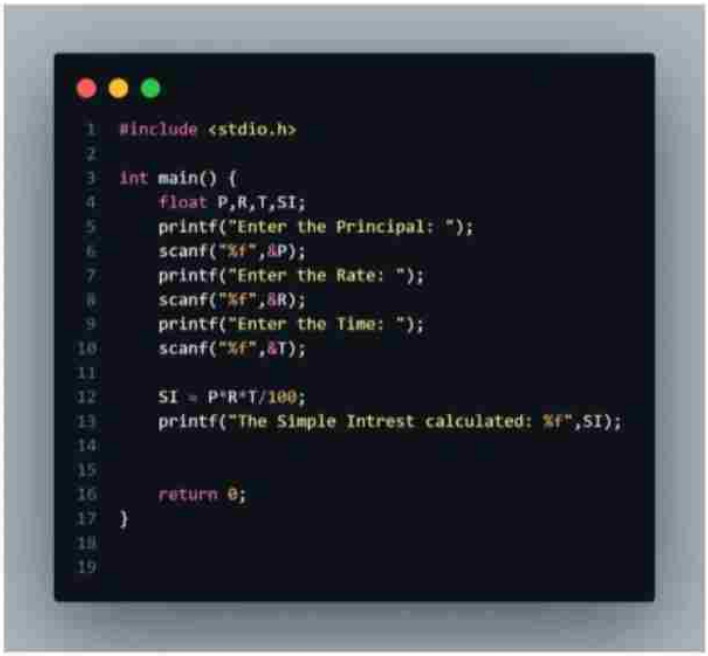
```c
#include <stdio.h>
int main() {
printf("My Name is Naman Rajput");
printf("\nI'm a B.Tech C.S.E student");
printf("\nMy SapID is: 590025758");
return 0;
}
```

Output:

```
My Name is Naman Rajput
I'm a B.Tech C.S.E student
My SapID is: 590025758
```

Q2. WAP to calculate Simple Interest.

Code:



```c
#include <stdio.h>

int main() {
    float P,R,T,SI;
    printf("Enter the Principal: ");
    scanf("%f",&P);
    printf("Enter the Rate: ");
    scanf("%f",&R);
    printf("Enter the Time: ");
    scanf("%f",&T);

    SI = P*R*T/100;
    printf("The Simple Intrest calculated: %f",SI);


    return 0;
}
```

Output:

```
Enter the Principal: 5000
Enter the Rate: 3
Enter the Time: 7.5
The Simple Intrest calculated: 1125.000000
```

Q3. WAP to calculate area and circumference of the circle.

Code:

```c
#include<stdio.h>
int main(){
    float r,area,cir;
    printf("Enter the radius of the Circle: ");
    scanf("%f",&r);
    area = 3.14 * r * r  ;
    cir = 2 * 3.14 * r;
    printf("The Area of Circle: %f",area);
    printf("\nThe Circumference of Circle: %f",cir);
    return 0;

}
```

Output:

```
Enter the radius of the Circle: 10.5
The Area of Circle: 346.184998
The Circumference of Circle: 65.940002
```

Q4. WAP to calculate the area and perimeter of a Rectangle.

Code:

```c
#include<stdio.h>
int main(){
    float l,b,area,p;
    printf("Enter the Length of Rectangle: ");
    scanf("%f",&l);
    printf("Enter the Breadth of Rectangle: ");
    scanf("%f",&b);
    area = l * b;
    p = 2 * (l + b);
    printf("The Area of Rectangle: %f",area);
    printf("\nThe Perimeter of Rectangle: %f",p);
    return 0 ;

}
```

Output:

```
Enter the Length of Rectangle: 16
Enter the Breadth of Rectangle: 20
The Area of Rectangle: 320.000000
The Perimeter of Rectangle: 72.000000
```

Q5. WAP to convert Temperature from Celsius to Fahrenheit.

Code:

```c
#include<stdio.h>
int main(){
    float c,f;
    printf("Enter the Temperature(in Celsius): ");
    scanf("%f",&c);
    f = (9 * c)/5 + 32;
    printf("Temperature in Fahrenheit: %f",f);
    return 0 ;
}
```

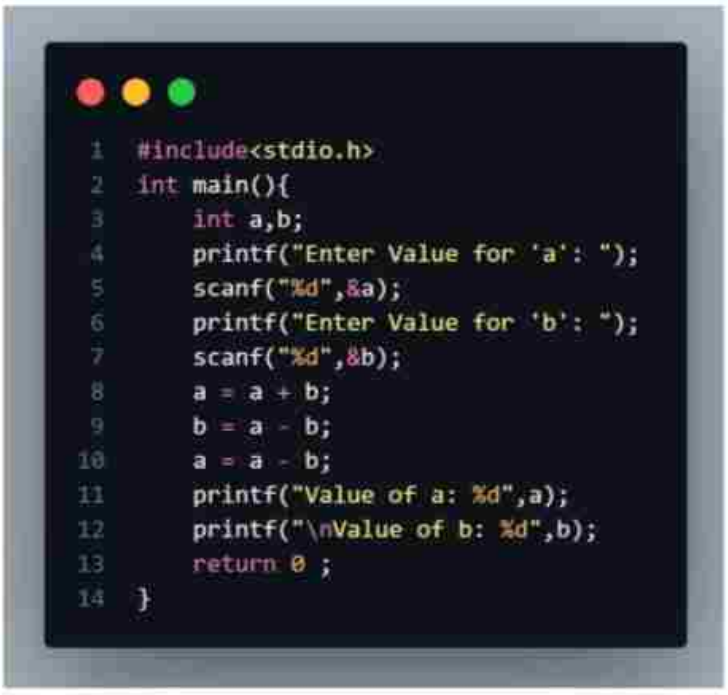
Output:

```
Enter the Temperature(in Celsius): 37
Temperature in Fahrenheit: 98.599998
```

Q6. WAP to swap the content of Two Variables.

(I).

Code:



```c
#include<stdio.h>
int main(){
    int a,b;
    printf("Enter Value for 'a': ");
    scanf("%d",&a);
    printf("Enter Value for 'b': ");
    scanf("%d",&b);
    a = a + b;
    b = a - b;
    a = a - b;
    printf("Value of a: %d",a);
    printf("\nValue of b: %d",b);
    return 0 ;
}
```

(II).

Code:

```c
#include<stdio.h>
int main(){
    int a,b;
    printf("Enter Value for 'a': ");
    scanf("%d",&a);
    printf("Enter Value for 'b': ");
    scanf("%d",&b);
    a = a * b;
    b = a / b;
    a = a / b;
    printf("Value of a: %d",a);
    printf("\nValue of b: %d",b);
    return 0 ;
}
```

Output:

```
Enter Value for 'a': 10
Enter Value for 'b': 15
Value of a: 15
Value of b: 10
```

Q7. WAP to calculate Compound Interest.

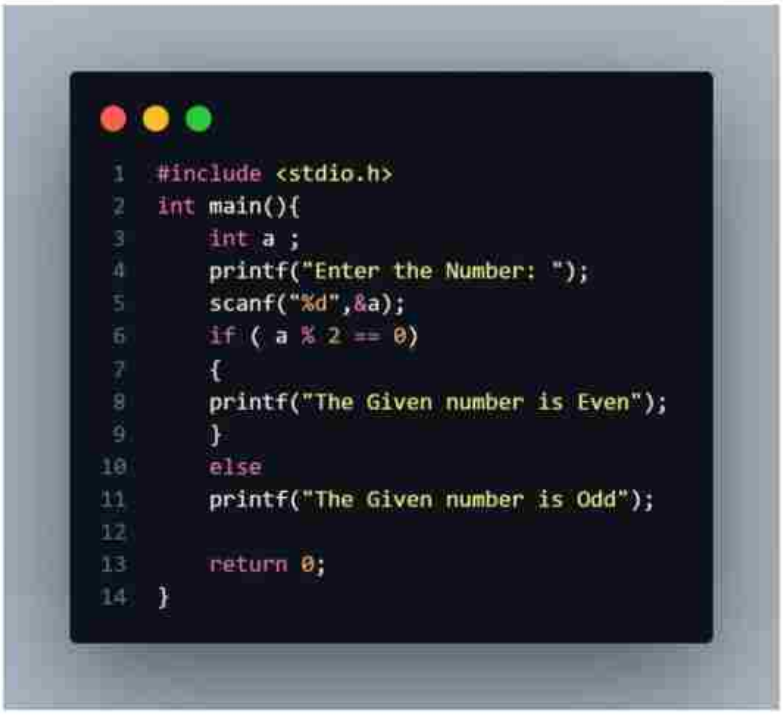
```c
#include <stdio.h>
#include <math.h>

int main() {
    float P,R,T,CA,CI,r;
    printf("Enter the Principal: ");
    scanf("%f",&P);
    printf("Enter the Rate: ");
    scanf("%f",&R);
    printf("Enter the Time: ");
    scanf("%f",&T);
    r = 1 + (R/100);
    CA = P * pow(r,T);
    CI = CA - P;

    printf("The Compound Intrest calculated: %f",CI);


    return 0;
}
```

Output:

```
Enter the Principal: 5000
Enter the Rate: 3
Enter the Time: 7.5
The Compound Intrest calculated: 1240.926758
```

Q8. WAP to check the numbers is even or odd.

Code:



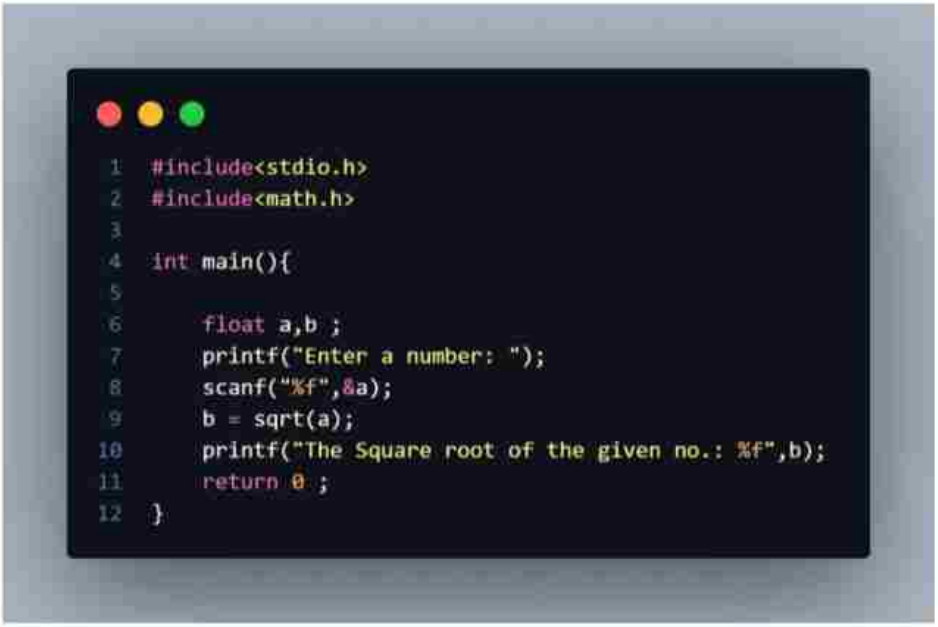
```c
#include <stdio.h>
int main(){
    int a ;
    printf("Enter the Number: ");
    scanf("%d",&a);
    if ( a % 2 == 0)
    {
    printf("The Given number is Even");
    }
    else
    printf("The Given number is Odd");

    return 0;
}
```

Output:

```
Enter the Number: 69
The Given number is Odd
```

Q9. WAP to calculate Square Root of a given number.

Code:



```c
#include<stdio.h>
#include<math.h>

int main(){

    float a,b ;
    printf("Enter a number: ");
    scanf("%f",&a);
    b = sqrt(a);
    printf("The Square root of the given no.: %f",b);
    return 0 ;
}
```

Output:

```
Enter a number: 256
The Square root of the given no.: 16.000000
```

Q10. WAP to calculate the roots of a Quadratic Equation.

Code:

```c
#include<stdio.h>
#include<math.h>
int main(){
    float a , b , c , D , x1 , x2;
    printf("Format of Quadratic Equation: ax^2 + bx + c");
    printf("\nEnter the value of a: ");
    scanf("%f",&a);
    printf("Enter the value of b: ");
    scanf("%f",&b);
    printf("Enter the value of c: ");
    scanf("%f",&c);
    D = sqrt((b * b) - 4 * a * c);
    x1 = (- b + D) / (2 * a);
    x2 = (- b - D) / (2 * a);
    printf("The roots of the given Quadratic Equation is: %f , ",x1);
    printf("%f",x2);
    return 0 ;
}
```

Output:

```
Enter the value of a: 1
Enter the value of b: -7
Enter the value of c: -3
The roots of the given Quadratic Equation is: 7.405125 , -0.405125
```