

Week 1

Q1. WAP to print Basic Information.

Code:

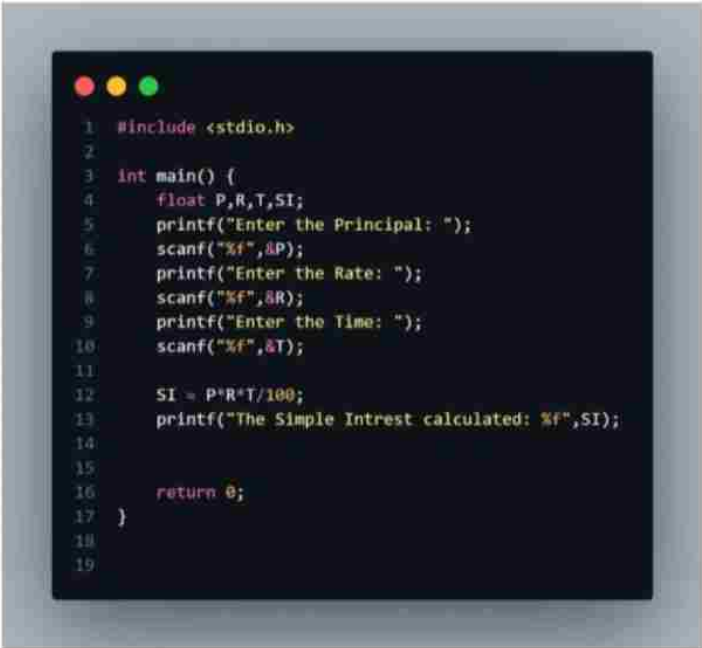
```
1 #include <stdio.h>
2 int main() {
3     printf("My Name is Naman Rajput");
4     printf("\nI'm a B.Tech C.S.E student");
5     printf("\nMy SapID is: 590025758");
6     return 0;
7 }
```

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:



```
1 #include <stdio.h>
2
3 int main() {
4     float P,R,T,SI;
5     printf("Enter the Principal: ");
6     scanf("%f",&P);
7     printf("Enter the Rate: ");
8     scanf("%f",&R);
9     printf("Enter the Time: ");
10    scanf("%f",&T);
11
12    SI = P*R*T/100;
13    printf("The Simple Intrest calculated: %f",SI);
14
15
16    return 0;
17 }
18
19
```

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:

```
1 #include<stdio.h>
2 int main(){
3     float r,area,cir;
4     printf("Enter the radius of the Circle: ");
5     scanf("%f",&r);
6     area = 3.14 * r * r ;
7     cir = 2 * 3.14 * r;
8     printf("The Area of Circle: %f",area);
9     printf("\nThe Circumference of Circle: %f",cir);
10    return 0;
11
12 }
```

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:

```
1 #include<stdio.h>
2 int main(){
3     float l,b,area,p;
4     printf("Enter the Length of Rectangle: ");
5     scanf("%f",&l);
6     printf("Enter the Breadth of Rectangle: ");
7     scanf("%f",&b);
8     area = l * b;
9     p = 2 * (l + b);
10    printf("The Area of Rectangle: %f",area);
11    printf("\nThe Perimeter of Rectangle: %f",p);
12    return 0 ;
13
14 }
```

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:

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

Output:

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

Q6. WAP to swap the content of Two Variables.

(i).

Code:

```
1  #include<stdio.h>
2  int main(){
3      int a,b;
4      printf("Enter Value for 'a': ");
5      scanf("%d",&a);
6      printf("Enter Value for 'b': ");
7      scanf("%d",&b);
8      a = a + b;
9      b = a - b;
10     a = a - b;
11     printf("Value of a: %d",a);
12     printf("\nValue of b: %d",b);
13     return 0 ;
14 }
```

(II).

Code:

```
1  #include<stdio.h>
2  int main(){
3      int a,b;
4      printf("Enter Value for 'a': ");
5      scanf("%d",&a);
6      printf("Enter Value for 'b': ");
7      scanf("%d",&b);
8      a = a * b;
9      b = a / b;
10     a = a / b;
11     printf("Value of a: %d",a);
12     printf("\nValue of b: %d",b);
13     return 0 ;
14 }
```

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.

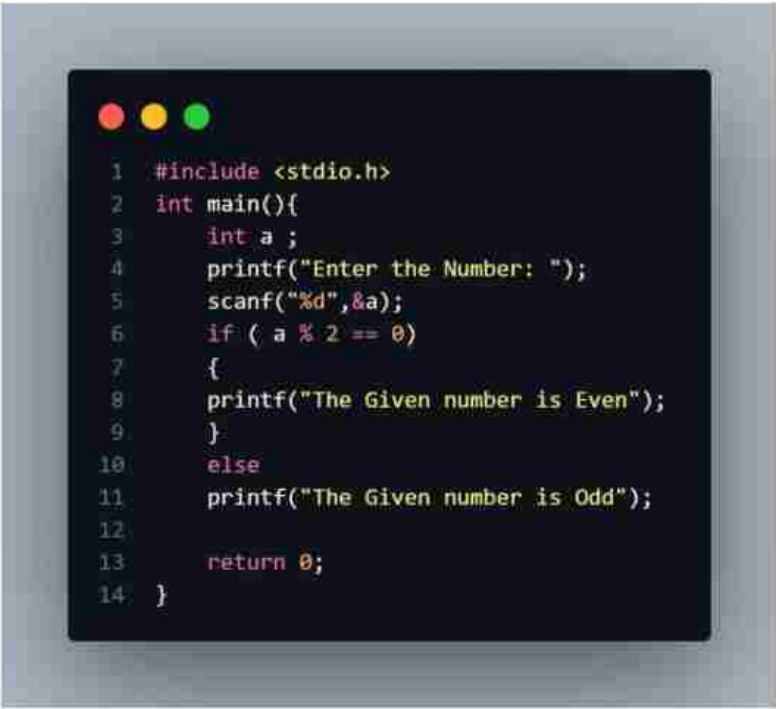
```
1  #include <stdio.h>
2  #include <math.h>
3
4  int main() {
5      float P,R,T,CA,CI,r;
6      printf("Enter the Principal: ");
7      scanf("%f",&P);
8      printf("Enter the Rate: ");
9      scanf("%f",&R);
10     printf("Enter the Time: ");
11     scanf("%f",&T);
12     r = 1 + (R/100);
13     CA = P * pow(r,T);
14     CI = CA - P;
15
16     printf("The Compound Intrest calculated: %f",CI);
17
18
19     return 0;
20 }
```

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:

A screenshot of a terminal window with a dark background and light-colored text. The window has three colored window control buttons (red, yellow, green) in the top-left corner. The code is a C program to check if a number is even or odd. It includes the standard input/output header, defines a main function, declares an integer variable 'a', prompts the user to enter a number, reads the input, and uses an if-else statement to print whether the number is even or odd. The program returns 0 and ends the main function.

```
1  #include <stdio.h>
2  int main(){
3      int a ;
4      printf("Enter the Number: ");
5      scanf("%d",&a);
6      if ( a % 2 == 0)
7      {
8          printf("The Given number is Even");
9      }
10     else
11     printf("The Given number is Odd");
12
13     return 0;
14 }
```

Output:

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

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

Code:

```
1  #include<stdio.h>
2  #include<math.h>
3
4  int main(){
5
6      float a,b ;
7      printf("Enter a number: ");
8      scanf("%f",&a);
9      b = sqrt(a);
10     printf("The Square root of the given no.: %f",b);
11     return 0 ;
12 }
```

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:

```
1  #include<stdio.h>
2  #include<math.h>
3  int main(){
4      float a , b , c , D , x1 , x2;
5      printf("Format of Quadratic Equation: ax^2 + bx + c");
6      printf("\nEnter the value of a: ");
7      scanf("%f",&a);
8      printf("Enter the value of b: ");
9      scanf("%f",&b);
10     printf("Enter the value of c: ");
11     scanf("%f",&c);
12     D = sqrt((b * b) - 4 * a * c);
13     x1 = (- b + D) / (2 * a);
14     x2 = (- b - D) / (2 * a);
15     printf("The roots of the given Quadratic Equation is: %f , ",x1);
16     printf("%f",x2);
17     return 0 ;
18 }
```

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
```