

(a) Program to print N prime numbers.

```
#include < stdio.h >
int main()
{
    int n, i = 3, count, c;
    printf("Enter the number of prime numbers
           to print \n");
    scanf("%d", &n);
    if (n >= 1)
    {
        printf("first %d prime numbers are: \n", n);
        printf("%d\n", 2);
        for (count = 2; count <= n)
        {
            if ((i * c == 0))
                break;
            if (c == 1)
            {
                printf("%d\n", i);
                count++;
            }
            i++;
        }
        return 0;
    }
}
```

Output of program:-

Enter the number of prime numbers required,

first 10 prime numbers are !

2

3

5

7

11

13

17

19

23

29

Program - 2

(b)

program to find whether the given Number is a
Prime Number:-

// include <stdio.h>

```
int main() {
```

```
    int n, i, flag = 0;
```

```
    printf("Enter a positive integer: ");
```

```
    scanf("%d", &n);
```

```
    for(i = 2; i <= n/2; ++i) {
```

// condition for non-prime

```
    if(n % i == 0) {
```

```
        flag = 1;
```

```
        break;
```

```
}
```

```
if
```

```
(n == 1) {
```

```
    printf("1 is neither prime nor composite");
```

```
}
```

```
else {
```

```
    if(flag == 0)
```

```
        printf("%d is a prime number.", n);
```

```
    else
```

```
        printf("%d is not a prime number.", n);
```

```
}
```

```
return 0;
```

```
}
```

Output of Program:-

Enter a positive integer: 29

29 is a prime number.

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(c)

Program to find largest of three numbers:-

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

```
int main() {
```

```
    double n1, n2, n3;
```

```
    printf("Enter the three numbers : ");
```

```
    scanf("%lf %lf %lf", &n1, &n2, &n3);
```

```
    if (n2 >= n2) {
```

```
        if (n1 >= n3)
```

```
            printf("%lf is the largest number",
```

```
                   ", n1);
```

```
        else
```

```
            printf("%lf is the largest number",
```

```
                   ", n3);
```

```
    } else {
```

```
        if (n2 >= n3)
```

```
            printf("%lf is the largest number",
```

```
                   ", n2);
```

```
        else
```

```
            printf("%lf is the largest number.",
```

```
                   ", n3);
```

```
}
```

```
return 0;
```

```
}
```

Output of the Program -

Enter three numbers : -4, 5

3.9

5.6

5.60 is the largest Number

(d) Program to find sum and Average of Three Real Numbers.

```
#include <stdio.h>
int main()
{
    int a, b, c;
    float avg;
    printf("Enter Three Numbers\n");
    printf("Enter three numbers\n");
    printf("Enter First Number : ");
    scanf("%d", &a);
    printf("Enter Second Number : ");
    scanf("%d", &b);
    printf("Enter Third Number : ");
    scanf("%d", &c);

    printf(".....\n");
    /* To find average */
    avg = a+b+c / 3.0;
    printf("Average of Three Numbers : ");
    printf("%.f", avg);
    return 0;
}
```

output of program:-

Enter Three Numbers

Enter First Number : 25

Enter Second Number : 4

Enter third Number : 2

Average of Three Numbers : 29.666666

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(e) program to print a Table of any Number:-

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

void main()
{
    int i, no, table = 1;
    clrscr();
    printf("Enter any number : ");
    scanf("%d", &no);
    printf("Table of %d\n", no);
    for (i = 1; i <= 10; i++)
    {
        table = no * i;
        printf("%d ", table);
        printf("\n");
    }
    getch();
}
```

output of program:-

Enter any number; 5

Table of 5

5

10

15

20

25

30

35

40

45

50

Program - 6

(3) Program to reverse a given Number

Using for loop
For loop is if

```
int, rev = 0, remainder;
printf("Enter an integer\n");
scanf("%d", &n);
while (n != 0) {
    remainder = n % 10;
    rev = rev * 10 + remainder;
    n /= 10;
}
printf("Reversed number = %d", rev);
return 0;
```

}

Output of program :-

Enter an Integer : 2345

Reversed number = 5432

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(6) program to print fibonacci series :-

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

```
int main() {
```

```
    int i, n, t1 = 0, t2 = 1, next term;
```

```
    printf("Enter the number of terms: ");
```

```
    scanf("%d", &n);
```

```
    printf("fibonacci series: ");
```

```
    for (i = 1; i <= n; i++) {
```

```
        printf("%d ", t1);
```

```
        next Term = t1 + t2;
```

```
        t1 = t2;
```

```
        t2 = next Term;
```

```
}
```

```
return 0;
```

```
}
```

output of program :-

Enter the number of terms : 10.

fibonacci series : 0, 1, 2, 3, 5, 8, 13, 21, 34,

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(7) write a program to calculate simple interest ?

(8)

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

```
int main( )
```

```
{
```

```
    int p, r, t, int - amt;
```

```
    printf("Input principle, Rate of Interest & Time  
    to find simple Interest : \n");
```

```
    scanf("%d %d %d", &p, &r, &t);
```

```
    int - amt = (p * r * t) / 100;
```

```
    printf("Simple Interest = %d", int - amt);
```

```
    return 0;
```

```
20
```

```
}
```

output of program:-

Input Data: $p = 10000$, $r = 10\%$, $t = 12$ year

Input principle, Rate of Interest & Time to
find simple Interest :

Simple Interest = 12000

Program - 9

(8)

Program to find Area of square & circumference of a circle.

```
#include <stdio.h>
int main()
```

{

```
int circle_radius;
```

```
float PI_VALUE = 3.14, circle_area, circle_circumf;
```

```
printf("Enter radius of circle : ");
```

```
scanf("%d", &circle_radius);
```

```
circle_area = PI_VALUE * circle_radius * circle_radius;
```

```
printf("Area of circle is : %.2f", circle_area);
```

```
circle_circumf = 2 * PI_VALUE * circle_radius;
```

```
printf("Circumference of circle is : %.2f", circle_circumf);
```

```
return 0;
```

}

Output of program:-

```
Enter radius of circle : 2
```

```
Area of circle is : 12.560000
```

```
Circumference of circle is : 12.560000
```

Program - 10

(9) Program to Show Call by Reference

#include <stdio.h>

```
void change(int num) {
```

printf("Before adding value inside function
num = %d\n", num);
num = num + 100;

printf("After adding value inside function
num = %d\n", num);

```
int main() {
```

```
int x = 100;
```

```
printf("Before function call x = %d\n", x);
```

change(x); // passing value in function

```
printf("After function call x = %d\n", x);
```

```
return 0;
```

```
}
```

Output of program:-

Before function call x = 100

Before adding value inside function

num = 100

After adding value inside function

num = 200

After function call x = 100

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(10) program to show call by value.

```
#include <iostream>
using namespace std;
void change(int data);
int main()
{
    int data = 3;
    change(data);
    cout << "Value of the data is: " << data <<
    endl;
    return 0;
}
void change(int data)
{
    data = 5;
}
```

Output of program:-

Value of data is : 3

program - 12

(11) Program to check whether the given Number is an Armstrong Number

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

```
int main() {
```

```
    int num, originalNum, remainder, result  
        = 0;
```

```
    printf("Enter a three-digit integer: ");
```

```
    scanf("%d", &num);
```

```
    originalNum = num;
```

```
    while (originalNum != 0) {
```

```
        // remainder contains the last digit
```

```
        remainder = originalNum % 10;
```

```
        result += remainder * remainder * remainder;
```

```
        // removing last digit from the original  
        number
```

```
        originalNum /= 10;
```

```
    if (result == num)
```

```
        printf("%d is an Armstrong number.",  
               num);
```

```
    else
```

```
        printf("%d is not a Armstrong  
               Number.", num);
```

```
    return 0;
```

```
}
```

Output of program:-

Enter a three-digit integer: 371

371 is an Armstrong number.