Assignment – 10--

A Job Ready Bootcamp in C++, DSA and IOT MySirG Functions in C Language

1. Write a function to calculate the area of a circle. (TSRS)
2. #include<stdio.h>
3. float Areacircle(float a)
4. {
5. float Area;
6. Area = 3.14\*a\*a;
7. return Area;
8. }
9. int main()
10. {
11. float radius, area;
12. printf("Enter radius of the circle\n");
13. scanf("%f", &radius);
14. area = Areacircle(radius);
15. printf("Area of circle is %f", area);
16. return 0;
17. }
18. Write a function to calculate simple interest. (TSRS)

#include<stdio.h>

float SimpleInt(float a, float b, float c)

{

     float si=(a\*b\*c)/100;

     return si;

}

int main()

{

    float p, r, t, j;

    printf("Enter Principle rate and time\n");

    scanf("%f%f%f", &p,&r,&t);

    j = SimpleInt(p,r,t);

    printf("Simple Interest is %.2f", j);

    return 0;

}

1. Write a function to check whether a given number is even or odd. Return 1 if the number is even, otherwise return 0. (TSRS)
2. #include<stdio.h>
3. int EvenOdd(int a)
4. {
5. if (a%2==0)
6. {
7. return 1;
8. }
9. else
10. return 0;
12. }
13. int main()
14. {
15. int n, EveOdd;
16. printf("Enter a number\n");
17. scanf("%d", &n);
18. EveOdd = EvenOdd(n);
19. if (EveOdd == 1)
20. {
21. printf("Even Number");
22. }
23. else
24. printf("Odd Number\n");
25. }

4. Write a function to print first N natural numbers (TSRN)

#include<stdio.h>

int Num(int a)

{

    int i;

    for (int i = 1; i < a; i++)

    {

          printf("%d ", i);

    }

}

int main()

{

    int n, NaturalNum;

    printf("Enter a number\n");

    scanf("%d",&n);

    NaturalNum = Num(n);

    printf("%d", NaturalNum);

}

5. Write a function to print first N odd natural numbers. (TSRN)

#include<stdio.h>

int Num();

int Num(int a)

{

    int i;

    for ( i = 1; i < 2\*a-1; i=i+2)

    {

        printf("%d ", i);

    }

}

int main()

{

    int n, NaturalNum;

    printf("Enter a number\n");

    scanf("%d",&n);

    NaturalNum = Num(n);

    printf("%d", NaturalNum);

}

6. Write a function to calculate the factorial of a number. (TSRS)

#include<stdio.h>

int Num();

int Num(int a)

{

    int i,f=1;

    for ( i = 1; i <=a; i++)

    {

       f=f\*i;

    }

    return f;

}

int main()

{

    int n, NaturalNum;

    printf("Enter a number\n");

    scanf("%d",&n);

    NaturalNum = Num(n);

    printf("%d", NaturalNum);

}

7. Write a function to calculate the number of combinations one can make from n items and r selected at a time. (TSRS)

#include<stdio.h>

int factorial(int);

int find\_ncr(int, int);

int main(){

   int n, r;

   int ncr;

   printf("Enter the value of n and r\n");

   scanf("%d%d",&n,&r);

   ncr = find\_ncr(n, r);

   printf("%dC%d = %d\n", n, r, ncr);

   return 0;

}

int find\_ncr(int n, int r) {

   int result;

   result = factorial(n)/(factorial(r)\*factorial(n-r));

    return result;}

    int factorial(int n) {

   int c;

   int result = 1;

   for (c = 1; c <= n; c++)

   result = result\*c;

   return result;

}

8. Write a function to calculate the number of arrangements one can make from n items and r selected at a time. (TSRS)

#include<stdio.h>

int factorial(int);

int find\_pnr(int, int);

int main(){

   int n, r;

   int pnr;

   printf("Enter the value of n and r\n");

   scanf("%d%d",&n,&r);

   pnr = find\_pnr(n, r);

   printf("%d and %d = %d\n", n, r, pnr);

   return 0;

}

  int factorial(int n) {

   int c;

   int result = 1;

   for (c = 1; c <= n; c++)

   result = result\*c;

   return result;

}

int find\_pnr(int n, int r)

{

    int result;

    result = factorial(n)/(factorial(n-r));

    return result;

}

9. Write a function to check whether a given number contains a given digit or not. (TSRS)

#include<stdio.h>

int input(int n,int p)

{

    int r;

    while (n!=0)

    {

         r=n%10;

         if (r==p)

         {

            return r;

         }

         n=n/10;

    }

}

int main()

{

    int n,p,s;

    printf("Enter a number\n");

    scanf("%d", &n);

    printf("Enter a number\n");

    scanf("%d", &p);

    input(n,p);

    if (input(n,p))

    {

        printf("%d Contains the digit %d\n", n,p);

    }

    else

    {

         printf("Not ontains the digit\n");

    }

}

10. Write a function to print all prime factors of a given number. For example, if the number is 36 then your result should be 2, 2, 3, 3. (TSRN)

#include<stdio.h>

int input(int n)

{

    int i;

    for ( i = 2; i != 1; i++)

    {

        while (n%i==0)

        {

            n=n/i;

            printf("%d ", i);

        }

    }

}

int main()

{

    int n;

    printf("Enter a number\n");

    scanf("%d", &n);

    input(n);

}