**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)**

**ANS;-** **#include<stdio.h>**

**float findArea(int r)**

**{**

**return 3.14\*r\*r;**

**}**

**int main()**

**{**

**int radius;**

**printf("Enter the radius of circle: ");**

**scanf("%d",&radius);**

**printf("Area of circle is: %.2f",findArea(radius));**

**return 0;**

**}**

1. **Write a function to calculate simple interest. (TSRS)**

**ANS;-**

**#include <stdio.h>**

**float simpleIntrest(float p, float r, float t)**

**{**

**return (p \* r \* t) / 100.0;**

**}**

**int main()**

**{**

**float p, r, t;**

**printf("Enter the value of P,R,T: ");**

**scanf("%f%f%f", &p, &r, &t);**

**printf("Simple Intrest is: %.2f", simpleIntrest(p, r, t));**

**return 0;**

**}**

**3. Write a function to check whether a given number is even or odd. Return 1 if the**

**number is even, otherwise return 0. (TSRS)**

**ANS;-** **#include <stdio.h>**

**int checkEvenOdd(int n)**

**{**

**if (n % 2 == 0)**

**return 1;**

**return 0;**

**}**

**int main()**

**{**

**int num;**

**printf("Enter the number: ");**

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

**if (checkEvenOdd(num))**

**printf("Number is even");**

**else**

**printf("Number is odd");**

**return 0;**

**}**

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

**ANS;-** **#include <stdio.h>**

**void print(int n)**

**{**

**for (int i = 1; i <= n; i++)**

**printf("%d ", i);**

**}**

**int main()**

**{**

**int n;**

**printf("Enter the number: ");**

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

**print(n);**

**return 0;**

**}**

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

**ANS;-** **#include <stdio.h>**

**void print(int n)**

**{**

**for (int i = 1; i <= n\*2; i+=2)**

**printf("%d ", i);**

**}**

**int main()**

**{**

**int n;**

**printf("Enter the number: ");**

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

**print(n);**

**return 0;**

**}**

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

**ANS;-** **#include <stdio.h>**

**int fact(int n)**

**{**

**int fact=1;**

**for(int i=1; i<=n; i++)**

**fact\*=i;**

**return fact;**

**}**

**int main()**

**{**

**int num;**

**printf("Enter the number: ");**

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

**printf("Factorial is: %d",fact(num));**

**return 0;**

**}**

**7. Write a function to calculate the number of combinations one can make from n items**

**and r selected at a time. (TSRS)**

**ANS;-** **#include <stdio.h>**

**int fact(int n)**

**{**

**int fact=1;**

**for(int i=1; i<=n; i++)**

**fact\*=i;**

**return fact;**

**}**

**int combi(int n,int r)**

**{**

**return fact(n)/(fact(n-r)\*fact(r));**

**}**

**int main()**

**{**

**int x,y;**

**printf("Enter the two number: ");**

**scanf("%d%d", &x,&y);**

**printf("%d combination!",combi(x,y));**

**return 0;**

**}**

**8. Write a function to calculate the number of arrangements one can make from n items**

**and r selected at a time. (TSRS)**

**ANS;-** **#include <stdio.h>**

**int fact(int n)**

**{**

**int fact=1;**

**for(int i=1; i<=n; i++)**

**fact\*=i;**

**return fact;**

**}**

**int arrange(int n,int r)**

**{**

**return fact(n)/fact(n-r);**

**}**

**int main()**

**{**

**int x,y;**

**printf("Enter the two number: ");**

**scanf("%d%d", &x,&y);**

**printf("%d arrangement!",arrange(x,y));**

**return 0;**

**}**

**9. Write a function to check whether a given number contains a given digit or not.**

**(TSRS)**

**ANS;-** **#include <stdio.h>**

**int check(int n, int digit)**

**{**

**while (n != 0)**

**{**

**if (n % 10 == digit)**

**return 1;**

**n /= 10;**

**}**

**return 0;**

**}**

**int main()**

**{**

**int num, digit;**

**printf("Enter the two number: ");**

**scanf("%d%d", &num, &digit);**

**if (check(num, digit))**

**printf("YEs! contain");**

**else**

**printf("Not! Contain");**

**return 0;**

**}**

**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)**

**ANS;-** **#include <stdio.h>**

**int primeFactor(int n)**

**{**

**int i,j;**

**for (i = 1; i <= n; i++)**

**{**

**if (n % i == 0)**

**{**

**for (j = 2; j <= i / 2; j ++)**

**{**

**if (i % j == 0)**

**break;**

**}**

**if (j - 1 == i / 2)**

**printf("%d ", i);**

**}**

**}**

**}**

**int main()**

**{**

**int num;**

**printf("Enter the number: ");**

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

**primeFactor(num);**

**return 0;**

**}**