Assignment - 3 A Job Ready Bootcamp in C++, DSA and IOT

1. Write a program to check whether a given number is positive or non-positive.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number\n");

scanf("%d",&a);

a>0?printf("Postive"):printf("Non Positve");

return 0;

}

2. Write a program to check whether a given number is divisible by 5 or not

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number\n");

scanf("%d",&a);

a%5==0?printf("Divisible by 5"):printf("Not Divisible by 5");

return 0;

}

3. Write a program to check whether a given number is an even number or an odd

number. #include<stdio.h>

int main ()

{

int a;

printf("Enter a Number \n");

scanf("%d",&a);

if(a%2==0)

printf("Even");

else

printf("Odd");

return 0;

}

4. Write a program to check whether a given number is an even number or an odd

number without using % operator.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number\n");

scanf("%d",&a);

a%2==0?printf("Even"):printf("Odd");

return 0;

}

5. Write a program to check whether a given number is a three-digit number or not.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number\n");

scanf("%d",&a);

a>99 && a<1000?printf("Three Digit Number"):printf("Not a Three Digit Number");

return 0;

}

6. Write a program to print greater between two numbers. Print one number of both are

the same.

#include<stdio.h>

int main()

{

int a,b;

printf("Enter a Number\n");

scanf("%d %d",&a,&b);

a>=b?printf("%d",a):printf("%d",b);

return 0;

}

7. Write a program to check whether roots of a given quadratic equation are real &

distinct, real & equal or imaginary roots

#include<stdio.h>

int main ()

{

int a,b,c,i;

printf("Enter CO-efficient of Quadratic Equation i.e.-a,b,c of ax^2+bx+c=0 \n");

scanf("%d %d %d",&a,&b,&c);

i=(b\*b)-(4\*a\*c);

if(i>0)

printf("Real and Distinct roots");

else if(i==0)

printf("Real and Equal roots");

else if(i<0)

printf("Imaginary Roots");

return 0;

}

8. Write a program to check whether a given year is a leap year or not.

#include<stdio.h>

int main ()

{

int a;

printf("Enter a Year \n");

scanf("%d",&a);

if(a%4==0)

{

if(a%400==0)

printf("%d is a Leap Year",a);

else if(a%100==0)

printf("%d is not a Leap year",a);

else

printf("%d is a Leap Year",a);

}

else

printf("%d is Not a Leap Year",a);

return 0;

}

9. Write a program to find the greatest among three given numbers. Print number once

if the greatest number appears two or three times.

#include <stdio.h>

int main()

{

int X,Y,Z;

printf("Enter three Numbers \n ");

scanf("%d %d %d",&X,&Y,&Z);

if(X>Y)

{

if(X>Z)

printf("%d if the greatest of three numbers",X);

else

printf("%d is the greatest of three numbers",Z);

}

else if(Y>X)

{

if(Y>Z)

printf("%d is the greatest of three numbers",Y);

else

printf("%d is the greatest of three numbers",Z);

}

else

printf("%d is the greatest of three numbers",Z);

return 0;

}

10. Write a program which takes the cost price and selling price of a product from the

user. Now calculate and print profit or loss percentage.

#include<stdio.h>

int main()

{

int b,s,p;

printf("Enter Buying and Selling price respectively \n");

scanf("%d %d",&b,&s);

p=(s-b)\*100/b;

p>0?printf("profit %d %%",p):printf("Loss %d %%",-p);

return 0;

}

11. Write a program to take marks of 5 subjects from the user. Assume marks are given

out of 100 and passing marks is 33. Now display whether the candidate passed the

examination or failed.

#include<stdio.h>

int main()

{

int m,i;

printf("Enter marks obtained: \n");

for(i=0;i<5;i++)

{

scanf("%d",&m);

if(m>32)

printf("Pass \n");

else

printf("fail \n");

}

return 0;}

12. Write a program to check whether a given alphabet is in uppercase or lowercase.

#include<stdio.h>

int main()

{

char x;

printf("Enter an Alphabet \n");

scanf("%c",&x);

if(x>=65 && x<=90)

printf("%c is a Upercase Alphabet",x);

else if(x>=97 &&x<=122)

printf("%c is a lowercase alphabet",x);

else

printf("%c is not an Alphabet",x);

return 0;

}

13. Write a program to check whether a given number is divisible by 3 and divisible by 2.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number: \n");

scanf("%d",&a);

if(a%3==0 && a%2==0)

printf("%d is divisible by 3 and 2",a);

else

printf("%d is not divisible by 3 and 2");

return 0;

}

14. Write a program to check whether a given number is divisible by 7 or divisible by 3.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Number: \n");

scanf("%d",&a);

if(a%7==0 | a%3==0)

{

if(a%7==0 && a%3==0)

printf("%d is divisible by 7 and 3",a);

else if(a%7==0)

printf("%d is divisible by 7",a);

else

printf("%d is divisible by 3",a);

}

else

printf("%d is not divisible by 7 or 3",a);

return 0;

}

15. Write a program to check whether a given number is positive, negative or zero.

#include<stdio.h>

int main()

{

int a;

printf("Enter a Nuber: \n");

scanf("%d",&a);

if(a>0)

printf("%d is Postive",a);

else if(a==0)

printf("%d is Zero",a);

else

printf("%d is Negetive",a);

return 0;

}

16. Write a program to check whether a given character is an alphabet (uppercase), an

alphabet (lower case), a digit or a special character.

#include<stdio.h>

int main()

{

char x;

printf("Enter an Character \n");

scanf("%c",&x);

if(x>=65 && x<=90)

printf("%c is a Upercase Alphabet",x);

else if(x>=97 &&x<=122)

printf("%c is a lowercase alphabet",x);

else if(x>=48 && x<=57)

printf("%c is a Digit",x);

else if(x>=33 && x<=38)

printf("%c is a Special Character",x);

else

printf("%c is not an valid input",x);

return 0;

}

17. Write a program which takes the length of the sides of a triangle as an input. Display

whether the triangle is valid or not.

#include<stdio.h>

int main()

{

int a,b,c;

printf("Enter side lengths \n ");

scanf("%d %d %d",&a,&b,&c);

if(a<(b+c) && b<(a+c) && c<(a+b))

printf("Triangle is valid");

else

printf("Triangle is invalid");

return 0;

}

18. Write a program which takes the month number as an input and display number of

days in that month

#include<stdio.h>

int main()

{

int a=31,b=30,c=28,m;

printf("Number of the Month:\n ");

scanf("%d",&m);

if(m==2)

printf("%d",c);

else if(m<=7 && m%2!=0)

printf("%d",a);

else if(m>7 && m%2==0)

printf("%d",a);

else

printf("%d",b);

return 0;

}