**Assignment – 3 A Job Ready Bootcamp in C++, DSA and IOT MySirG**

***Input and output in C Language***

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

#include<stdio.h>

int main()

{

    int n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    if(n>0)

    {

        printf("Number is Positive:");

    }

    else

    {

        printf("Number is Negative:");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    int n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    if(n%5==0)

    {

        printf("Number is divisible by 5:");

    }

    else

    {

        printf("Number is 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 num;

    printf("Enter the numbers:");

    scanf("%d",&num);

    if(num%2==0)

    {

        printf("Even numbers:");

    }

    else

    {

        printf("Odd numbers:");

    }

    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 num;

    printf("Enter the numbers:");

    scanf("%d",&num);

    if(num & 1)

    {

        printf("Odd numbers:");

    }

    else

    {

        printf("Even numbers:");

    }

    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 n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    if(n>99 && n<1000)

    {

        printf("%d is a three digit numbers",n);

    }

    else

    {

        printf("%d is a not three digit numbers:",n);

    }

    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 the two numbers:");

    scanf("%d%d",&a,&b);

    if(a>b)

    {

        printf("%d a number is greater:",a);

    }

    else if(a<b)

    {

        printf("%d b number is greater:",b);

    }

    else

    {

        printf("One number of both are the same:");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    int year;

    printf("Enter the year:");

    scanf("%d",&year);

    if(year%4==0 && year%100!=0 || year%400==0)

    {

        printf("Leap Year:");

    }

    else

    {

        printf("Not Leap Year:");

    }

    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 n1,n2,n3;

    printf("Enter the three numbers:");

    scanf("%d %d %d",&n1,&n2,&n3);

    if(n1>=n2 && n1>=n3)

    {

        printf("%d first number is greatest:",n1);

    }

    else if(n2>=n1 && n2>=n3)

    {

        printf("%d second number is greatest:",n2);

    }

    else

    {

        printf("%d third number is greatest:",n3);

    }

    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 cp,sp,amt;

    printf("Enter the Cost Price:");

    scanf("%d",&cp);

    printf("Enter the Selling Price:");

    scanf("%d",&sp);

    if(sp>cp)

    {

        amt = sp-cp;

        printf("%d Profit:",amt);

    }

    else if(cp>sp)

    {

        amt = cp-sp;

        printf("%d Loss:",amt);

    }

    else

    {

        printf("No Loss No Profit:");

    }

    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 phy,math,hindi,eng,com;

    float per;

    printf("Enter the five subject:");

    scanf("%d %d %d %d %d",&phy,&math,&hindi,&eng,&com);

    per = (phy+math+hindi+eng+com)/5;

    printf("Percentage = %.2f\n",per);

    if(per>=60 && per<100)

    {

        printf("First Division:");

    }

    else if(per>=45 && per<60)

    {

        printf("Second Division");

    }

    else if(per>=33 && per<45)

    {

        printf("Third Division");

    }

    else if(per>=0 && per<33)

    {

        printf("Your are fail");

    }

    else

    {

        printf("Highest number 100:");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    char ch;

    printf("Enter the character:");

    scanf("%c",&ch);

    if(ch>=65 && ch<90)

    {

        printf("%c is Uppercase:",ch);

    }

    else if(ch>=97 && ch<122)

    {

        printf("%c is Lowercase:",ch);

    }

    else

    {

        printf("Please ! enter a character:");

    }

    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 n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    if(n%3==0 && n%2==0)

    {

        printf("Number is divisible by 3 and divisible by 2:");

    }

    else

    {

        printf("Number is not divisible by 3 and divisible by 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 n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    if(n%7==0 && n%3==0)

    {

        printf("Number is divisible by 7 and divisible by 3:");

    }

    else

    {

        printf("Number is not divisible by 7 and divisible by 3:");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    int num;

    printf("Enter the numbers:");

    scanf("%d",&num);

    if(num>0)

    {

        printf("Number is Positive:");

    }

    else if(num<0)

    {

        printf("Number is Negative:");

    }

    else

    {

        printf("Number is Zero:");

    }

    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 ch;

    printf("Enter the characters:");

    scanf("%c",&ch);

    if((ch>=65 && ch<=90 || ch>=90 && ch<=122))

    {

        printf("Character is Alphabet:");

    }

    else if(ch>=48 && ch<=57)

    {

        printf("Character is Digit:");

    }

    else

    {

        printf("Special Character:");

    }

    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 a1,a2,a3;

    printf("Enter angle of triangle:");

    scanf("%d %d %d",&a1,&a2,&a3);

    if((a1+a2>a3) && (a2+a3>a1) && (a3+a1>a2))

    {

        printf("Triangle is valid:");

    }

    else

    {

        printf("Triangle is not valid:");

    }

    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 month;

    printf("Enter the month 1-12:");

    scanf("%d",&month);

    if(month==1)

    {

        printf("January:");

    }

    else if(month==2)

    {

        printf("February:");

    }

    else if(month==3)

    {

        printf("March");

    }

    else if(month==4)

    {

        printf("April:");

    }

    else if(month==5)

    {

        printf("May");

    }

    else if(month==6)

    {

        printf("June:");

    }

    else if(month==7)

    {

        printf("July:");

    }

    else if(month==8)

    {

        printf("August:");

    }

    else if(month==9)

    {

        printf("September:");

    }

    else if(month==10)

    {

        printf("October:");

    }

    else if(month==11)

    {

        printf("November:");

    }

    else if(month==12)

    {

        printf("December:");

    }

    else

    {

        printf("Please Enter 1 to 12 month name:");

    }

    return 0;

}