***Assignment:-3***

***Decision Control Statement***

/\*

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

\*/

#include<stdio.h>

int main()

{

    int n;

    printf("Enter any number ");

    scanf("%d", &n);

    if (n > 0)

    {

        printf("%d is Positive Number", n);

    }

    else

    {

        printf("%d is Non-Positive Number", n);

    }

    return 0;

}

/\*

Qno2:- 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 any number ");

    scanf("%d", &n);

    if (n % 5 == 0)

    {

        printf("%d is Divisible by 5 number", n);

    }

    else

    {

        printf("%d is Not Divisible by 5 number", n);

    }

}

/\*

Qno3:- Write a program to check wether a given number is an even number or an odd number.

\*/

#include<stdio.h>

int main()

{

    int n;

    printf("Enter the any number ");

    scanf("%d", &n);

    if (n%2 == 0)

    {

        printf("%d is Even Number", n);

    }

    else

    {

        printf("%d is Odd Number", n);

    }

    return 0;

}

/\*

Qno4:- Write a program to check whether a given number is an even number or odd number without using % operator.

\*/

#include<stdio.h>

int main()

{

    int n, check;

    printf("Enter the any number ");

    scanf("%d", &n);

    check = n & 1;

    if (check == 0)

    {

            printf("%d is even number", n);

    }

    else

    {

        printf("%d is odd number", n);

    }

}

/\*

Qno5:- 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 any number ");

    scanf("%d", &n);

    if (n >= 100 && n< 1000)

    {

        printf("%d is a three-digits number", n);

    }

    else

    {

        printf("%d is Not three-digits number", n);

    }

    return 0;

}

/\*

Qno6:- Write a program to print greater number between two

numbers. Print one number of both are the same.

\*/

#include<stdio.h>

int main()

{

    int a, b;

    printf("Enter any number ");

    scanf("%d %d", &a, &b);

    if (a>b)

    {

        printf("A is the Greater Number");

    }

    else if (a == b)

    {

        printf("Both A & B are Equal Number");

    }

    else

    {

        printf("B is Greater Number");

    }

    return 0;

}

/\*

Qno7:- Write a program to check whether roots of a given Quadratic Equation

are real & distinct, real & eqlual or imaginary roots

\*/

#include<stdio.h>

int main()

{

    int a, b, c;

    printf("Enter any three number ");

    scanf("%d%d%d",&a, &b, &c);

    int dis = b\*b - 4\*a\*c;

    if (dis>0)

        printf("Real & Distinct");

    else if (dis<0)

        printf("Imaginary");

    else

        printf("Real and Equal");

    return 0;

}

/\*

Qno8:- Write a program to check whether a given number is a leap

year or not.

\*/

#include<stdio.h>

int main()

{

    int year;

    printf("Enter any Year ");

    scanf("%d", &year);

    if (year % 4 == 0)

    {

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

    }

    else

    {

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

    }

    return 0;

}

/\*

Qno9:- Write a program to find the grater number among three given numbers.

Print number once if the greater number appears two or three times.

\*/

#include<stdio.h>

int main()

{

    int a, b, c;

    printf("Enter the any three number ");

    scanf("%d %d %d", &a, &b, &c);

    if (a>b)

        a>c?printf("A is Greater number"):printf("C is Greater number");

    else

        b>c?printf("B is Greater Number"):printf("C is Greater Number");

    return 0;

}

/\*

Qno10:- 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;

    float profit = 0, loss = 0;

    printf("Enter the Cost Price & Selling Price of Product ");

    scanf("%d %d", &cp, &sp);

    if (sp>cp)

    {

        profit = ((sp - cp)\*100.0)/cp;

        printf("The profit percentage is %d and %d is %f ", cp, sp, profit);

    }

    else

    {

        loss = ((cp-sp)\*100)/cp;

        printf("The Loss percentage is %d and %d is %f ", cp, sp, loss);

    }

    return 0;

}

/\*

Qno11:- Write a program to take of 5 subject from the user. Assume marks

are given out of 100 and passing marks is 33. Now display whether the

candidate passed the examinatin or failed.

\*/

#include<stdio.h>

int main()

{

    int En, Ma, Sc, Co, OpMat;

    printf("Enter the Marks of English ");

    scanf("%d", &En);

    printf("Enter the Marks of Math ");

    scanf("%d", &Ma);

    printf("Enter the Marks of Science ");

    scanf("%d", &Sc);

    printf("Enter the Marks of Computer ");

    scanf("%d", &Co);

    printf("Enter the Marks of Optional Math ");

    scanf("%d", &OpMat);

    printf("\n\n");

    if (En>=33 && En<=100)

    {

        printf("Your pass in English Subject \n");

    }

    else

    {

        printf("\* Your are Fail in English Subject \n");

    }

    if (Ma>=33 && Ma<=100)

    {

        printf("Your pass in Math Subject \n");

    }

    else

    {

        printf("\* Your are Fail in Math Subject \n");

    }

    if (Sc>=33 && Sc<=100)

    {

        printf("Your pass in Science Subject \n");

    }

    else

    {

        printf("\* Your are Fail in Science Subject \n");

    }

    if (Co>=33 && Co<=100)

    {

        printf("Your pass in Computer Science Subject \n");

    }

    else

    {

        printf("\* Your are Fail in Computer Science Subject \n");

    }

    if (OpMat>=33 && OpMat<=100)

    {

        printf("Your pass in Optional Math Subject \n");

    }

    else

    {

        printf("\* Your are Fail in Optional Math Subject \n");

    }

}

/\*

Qno12:- Write a program to check whether a given alphabet is in uppercase or lowercase.

\*/

#include<stdio.h>

int main()

{

    char a;

    printf("Enter any alphabet ");

    scanf("%c", &a);

    if (a >= 'A' && a <='Z')

    {

        printf("%c is the Uppercase alphaber", a);

    }

    else if (a >= 'a' && a <= 'z')

    {

        printf("%c is the Lowercase alphaber", a);

    }

    else

    {

        printf("%c is Not a Alphaber Characters", a);

    }

}

/\*

Qno13:- 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 any number ");

    scanf("%d", &n);

    if (n%2 == 0 && n%3 == 0)

    {

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

    }

    else

    {

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

    }

}

/\*

Qno14:- 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 any number ");

    scanf("%d", &n);

    if (n % 3 == 0 && n % 7 == 0)

    {

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

    }

    else

    {

        printf("%d is the not divisible by 3 and divisible by 7", n);

    }

}

/\*

Qno15:- Write a program to check whether a given number is positive, negative or zero.

\*/

#include<stdio.h>

int main()

{

    int n;

    printf("Enter any number ");

    scanf("%d", &n);

    if (n>=1)

    {

        printf("%d is the Positive Number", n);

    }

    else if (n<=-1)

    {

        printf("%d is the Negative Number", n);

    }

    else if (n == 0)

    {

        printf("%d is the Zero Number", n);

    }

    else

    {

        printf("%d is the invalid Number", n);

    }

}

/\*

Qno16:- Write a program to check whether a given character is an alphabet (uppercase),

an alphaber(Lower Case), a digit or a special character.

\*/

#include<stdio.h>

int main()

{

    char a;

    printf("Enter any character ");

    scanf("%c", &a);

    if (a>= 'A' && a<= 'Z')

    {

        printf("%c is the Upper Case Alphaber\n", a);

    }

    else if (a>= 'a' && a<= 'z')

    {

        printf("%c is the Lower Case Alphabet\n", a);

    }

    else if (a>='0' && a<='9')

    {

        printf("%c is the digits character\n", a);

    }

    else

    {

        printf("%c is the Special Character\n", a);

    }

}

/\*

Qno17:- 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 P, B, H;

    printf("Enter the Hypotenius of a Trinagle ");

    scanf("%d", &H);

    printf("Enter the Perpendicular of a Trinagle ");

    scanf("%d", &P);

    printf("Enter the Base of a Trinagle ");

    scanf("%d", &B);

    if ((P+B> H))

    {

        printf("It is a Triangle ");

    }

    else

    {

        printf("It is Not a Triangle");

    }

}

/\*

Qno18:- 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 n;

    printf("Enter any month number 1 to 12 ");

    scanf("%d", &n);

    if (n == 1)

    {

        printf("Baishak:- The Days is 31 Days");

    }

    else if (n == 2)

    {

        printf("Jesth:- The Days is 31 Days");

    }

    else if (n == 3)

    {

        printf("Ashad:- The Days is 32 Days");

    }

    else if (n == 4)

    {

        printf("Sawan:- The Days is 31 Days");

    }

    else if (n == 5)

    {

        printf("Bhadra:- The Days is 31 Days");

    }

    else if (n == 6)

    {

        printf("Ashoj:- The Days is 31 Days");

    }

    else if (n == 7)

    {

        printf("Kartik:- The Days is 30 Days");

    }

    else if (n == 8)

    {

        printf("Manshir:- The Days is 29 Days");

    }

    else if (n == 9)

    {

        printf("Paush:- The Days is 30 Days");

    }

    else if (n == 10)

    {

        printf("Magh:- The Days is 29 Days");

    }

    else if (n == 11)

    {

        printf("Falgun:- The Days is 30 Days");

    }

    else if (n == 12)

    {

        printf("Chaitra:- The Days is 30 Days");

    }

    else

    {

        printf("Invilide Number Please Try Once Again !! Thank You Sir/ Mam");

    }

}