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**Conditional Statement**

**1. Write a C program to find maximum between two numbers.**

**Code :**

#include <stdio.h>

int main()

{

    int num1, num2;

    scanf("%d %d",&num1,&num2);

    if (num1 > num2)

    {

        printf("maximum : \n", num1);

    }

    else

    {

        printf("maximum : %d\n", num2);

    }

    return 0;

}

**Output :**

**6 8**

**maximum : 8**

**2. Write a C program to check whether a number is negative, positive or zero.**

**Code :**

#include <stdio.h>

int main()

{

    int num;

    scanf("%d",&num);

    if (num > 0)

    {

        printf("Positive");

    }

    else

    {

        printf("negative");

    }

    return 0;

}

**Output :**

**8**

**Positive**

**-8**

**negative**

**3. Write a C program to input any alphabet and check whether it is vowel or consonant.**

**Code :**

#include <stdio.h>

int main()

{

    char ch;

    scanf("%c", &ch);

    if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))

    {

        if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' ||

            ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U')

            {

            printf("%c is a vowel.\n", ch);

        }

        else

        {

            printf("%c is a consonant.\n", ch);

        }

    }

    else

    {

        printf("Invalid.\n");

    }

    return 0;

}

**Output :**

**a**

**a is a vowel.**

**b**

**b is a consonant.**

**4. Write a program that read three numbers and display minimum.**

**Code :**

#include <stdio.h>

int main()

{

    int num1, num2, num3;

    scanf("%d %d %d",&num1,&num2,&num3);

    if (num1 < num2 && num1 < num3)

    {

        printf("Minimum : %d\n", num1);

    }

    else if(num2 < num2 && num2 < num3)

    {

        printf("Minimum : %d\n", num2);

    }

    else

    {

      printf("Minimum : %d\n", num3);

    }

    return 0;

}

#include <stdio.h>

int main()

{

    int num1, num2, num3;

    scanf("%d %d %d",&num1,&num2,&num3);

    if (num1 < num2 && num1 < num3)

    {

        printf("Minimum : %d\n", num1);

    }

    else if(num2 < num2 && num2 < num3)

    {

        printf("Minimum : %d\n", num2);

    }

    else

    {

      printf("Minimum : %d\n", num3);

    }

    return 0;

}

**Output :**

**1 2 3**

**Minimum : 1**

**5. Write a program that read three numbers and display medium.**

**Code :**

#include <stdio.h>

int main()

{

    int num1, num2, num3;

    scanf("%d %d %d",&num1,&num2,&num3);

    if ((num1 <= num2 && num1 >= num3) || (num1 >= num2 && num1 <= num3))

        printf("Midium : %d\n", num1);

    else if ((num2 <= num1 && num2 >= num3) || (num2 >= num1 && num2 <= num3))

        printf("Midium : %d\n", num2);

    else

        printf("Midium : %d\n", num3);

    return 0;

}

**Output :**

**3 5 7**

**Midium : 5**

**6. Write a program that read mark and display result in division.**

**Code :**

#include <stdio.h>

int main()

{

    int mark;

    printf("Enter the student's mark: ");

    scanf("%d", &mark);

    if (mark >= 80)

    {

        printf("Distinction\n");

    }

    else if (mark >= 60)

    {

        printf("First Division\n");

    }

    else if (mark >= 50)

    {

        printf("Second Division\n");

    }

    else if (mark >= 40)

    {

        printf("Third Division\n");

    }

}

**Output :**

**Enter the student's mark: 70**

**First Division**

**Enter the student's mark: 99**

**Distinction**

**7. Write a program that read mark and display result in grade.**

**Code :**

#include<stdio.h>

int main()

{

    int marks;

    printf("Enter your marks ");

    scanf("%d",&marks);

    if(marks<0 || marks>100)

    {

        printf("invalid mark");

    }

    else if(marks<50)

    {

        printf("F");

    }

    else if(marks>=50 && marks<60)

    {

        printf("D");

    }

    else if(marks>=60 && marks<70)

    {

        printf("C");

    }

    else if(marks>=70 && marks<80)

    {

        printf("B");

    }

    else if(marks>=80 && marks<90)

    {

        printf("A");

    }

    else

    {

        printf("A+");

    }

}

**Output :**

**Enter your marks 90**

**A+**

**Enter your marks 120**

**invalid mark**

**8. Write a program that read any year and display leap year or not leap year.**

**Code :**

#include <stdio.h>

int main()

{

    int year;

    printf("Enter a year: ");

    scanf("%d", &year);

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

    {

        printf("%d is a leap year.\n", year);

    }

    else

    {

        printf("%d is not a leap year.\n", year);

    }

    return 0;

}

**Output :**

**Enter a year: 2020**

**2020 is a leap year.**

**9. Write a program that read three numbers (a,b,c) and determine the root of the quadratic  
equation: ax2+bx+c=0**

**Code :**

#include <stdio.h>

#include <math.h>

int main()

{

    float a, b, c;

    float discriminant, root1, root2;

    printf("Enter the coefficients a, b, and c: ");

    scanf("%f %f %f", &a, &b, &c);

    discriminant = b \* b - 4 \* a \* c;

    if (discriminant > 0)

    {

        root1 = (-b + sqrt(discriminant)) / (2 \* a);

        root2 = (-b - sqrt(discriminant)) / (2 \* a);

        printf("Root 1 = %.2f\n", root1);

        printf("Root 2 = %.2f\n", root2);

    }

    else if (discriminant == 0)

    {

        root1 = -b / (2 \* a);

        printf("Root = %.2f\n", root1);

    }

    else

    {

        printf("No real roots exist.\n");

    }

    return 0;

}

**Output :**

**Enter the coefficients a, b, and c: 1 7 3**

**Root 1 = -0.46**

**Root 2 = -6.54**

**10. Write a program that read three numbers and display maximum.**

**Code : same as 4**

**Output :**

**11. Write a program that read mark and display pass or fail.**

**Code :**

#include <stdio.h>

int main()

{

    float mark;

    const float passNumber = 40.0;

    scanf("%f", &mark);

    if (mark >= passNumber)

    {

        printf("Pass\n");

    }

    else

    {

        printf("Fail\n");

    }

    return 0;

}

**Output :**

**50**

**Pass**

**12. Write a C program to read weekday number and print weekday name using switch-case.**

**Code :**

#include <stdio.h>

int main()

{

    int weekday;

    printf("Enter the weekday : ");

    scanf("%d",&weekday);

        switch (weekday)

        {

            case 1:

                printf("Sunday\n");

                break;

            case 2:

                printf("Monday\n");

                break;

            case 3:

                printf("Tuesday\n");

                break;

            case 4:

                printf("Wednesday\n");

                break;

            case 5:

                printf("Thursday\n");

                break;

            case 6:

                printf("Friday\n");

                break;

            case 7:

                printf("Saturday\n");

                break;

            default:

                printf("Invalid weekday\n");

        }

    return 0;

}

**Output :**

**Enter the weekday : 2**

**Monday**

**13. Write a C program to check whether a character is VOWEL or CONSONANT using  
switch-case.**

**Code :**

#include <stdio.h>

int main()

{

    char ch;

    printf("Enter a character: ");

    scanf("%c", &ch);

    switch (ch)

    {

        case 'a':

        case 'A':

        case 'e':

        case 'E':

        case 'i':

        case 'I':

        case 'o':

        case 'O':

        case 'u':

        case 'U':

            printf("vowel.\n");

            break;

        default:

            printf("consonant.\n");

    }

    return 0;

}

**Output :**

**Enter a character: A**

**vowel.**

**14. Write a C program to design a calculator with basic operations using switch-case.**

**Code :**

#include <stdio.h>

int main()

{

    char operator;

    float num1, num2, result;

    printf("Enter an operator (+, -, \*, /): ");

    scanf(" %c", &operator);

    printf("Enter two numbers: ");

    scanf("%f %f", &num1, &num2);

    switch (operator)

    {

        case '+':

            result = num1 + num2;

            break;

        case '-':

            result = num1 - num2;

            break;

        case '\*':

            result = num1 \* num2;

            break;

        case '/':

            result = num1 / num2;

            break;

        default:

            printf("Invalid operator!\n");

            return 1;

    }

    printf("Result: %.2f\n", result);

    return 0;

}

**Output :**

**Enter an operator (+, -, \*, /): +**

**Enter two numbers: 4 5**

**Result: 9.00**

**15. Write a C program to check whether number is EVEN or ODD using switch-case.**

**Code :**

#include <stdio.h>

int main()

{

    int number;

    printf("Enter a number: ");

    scanf("%d", &number);

    switch (number % 2)

    {

        case 0:

            printf("even number.\n");

            break;

        default:

            printf("odd number.\n");

    }

    return 0;

}

**Output :**

**Enter a number: 4**

**even number.**

**16. Write a C program to find number of days in a month using switch-case.**

**Code :**

#include <stdio.h>

int main()

{

    int month, days;

    printf("Enter the month (1 to 12): ");

    scanf("%d", &month);

    switch (month)

    {

        case 1:

        case 3:

        case 5:

        case 7:

        case 8:

        case 10:

        case 12:

            days = 31;

            break;

        case 4:

        case 6:

        case 9:

        case 11:

            days = 30;

            break;

        case 2:

            days = 28;

            break;

        default:

            printf("Invalid month!\n");

            return 0;

    }

    printf("Number of days in month %d is: %d\n", month, days);

    return 0;

}

**Output :**

**Enter the month (1 to 12): 8**

**Number of days in month 8 is: 31**

**17. Write a program to check a number whether positive or negative.**

**Code : Same as Num 2**

**Output :**

**18. Write a program to check a number whether even or odd.**

**Code :**

#include <stdio.h>

int main()

{

    int num;

    printf("Enter a num: ");

    scanf("%d", &num);

    if (num % 2 == 0)

    {

        printf("even num.\n");

    }

    else

    {

        printf("odd num.\n");

    }

    return 0;

}

**Output :**

**Enter a num: 3**

**odd num.**

**19. Write a program to check a number is divisible by both 11 and 9 or not.**

**Code :**

#include <stdio.h>

int main()

{

    int num;

    printf("Enter a num: ");

    scanf("%d", &num);

    if (num % 11 == 0 && num % 9 == 0)

    {

        printf("%d is divisible by both 11 and 9.\n",num);

    }

    else

    {

        printf("%d is not divisible by both 11 and 9.\n",num);

    }

    return 0;

}

**Output :**

**Enter a num: 81**

**81 is not divisible by both 11 and 9.**

**20.Write a program to check whether a character is alphabet number or any other symbol.**

**Code :**

#include <stdio.h>

int main()

{

    char ch;

    printf("Enter a character: ");

    scanf("%c",&ch);

    if ((ch >= 'A' && ch <= 'Z') || (ch >= 'a' && ch <= 'z'))

    {

        printf("alphabet.\n");

    }

    else if (ch >= '0' && ch <= '9')

    {

        printf("number.\n");

    }

    else

    {

        printf("symbol.\n");

    }

    return 0;

}

**Output :**

**Enter a character: A**

**alphabet.**

**21. Write a program to check whether a triangle is equilateral, bilateral or isosceles**

**Code :**

#include <stdio.h>

int main()

{

    float a,b,c;

    printf("Enter the three sides of the triangle: ");

    scanf("%f %f %f", &a, &b, &c);

    if (a == b && b == c)

    {

        printf("The triangle is an Equilateral triangle.\n");

    }

    else if (a == b || a == c || b == c)

    {

        printf("The triangle is an Isosceles triangle.\n");

    }

    else

    {

        printf("The triangle is a Scalene triangle.\n");

    }

    return 0;

}

**Output :**

**Enter the three sides of the triangle: 6 6 6**

**The triangle is an Equilateral triangle.**

**22.Write a program to check whether a triangle is valid or not. (a+b>c)**

**Code :**

#include <stdio.h>

int main()

{

    float a,b,c;

    printf("Enter the three sides of the triangle: ");

    scanf("%f %f %f", &a, &b, &c);

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

    {

        printf("The triangle is valid.\n");

    }

    else

    {

        printf("The triangle is not valid.\n");

    }

    return 0;

}

**Output :**

**Enter the three sides of the triangle: 4 6 8**

**The triangle is valid.**