

ASSIGNMENT-4

SUBJECT-CSL2601



2nd
SEMESTER

Write a program
for following
questions

NAME-PRATIK ANAND
ROLL-2002057
BRANCH-EE

1. WAP in C to input week number (1-7) and print the corresponding day of week name using switch case.

```
# include <stdio.h>
```

```
int main () {
```

```
int n;
```

```
printf ("Enter the week number\n");
```

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

```
switch (n)
```

```
{
```

```
case 1:
```

```
    printf ("Monday");
```

```
    break;
```

```
case 2:
```

```
    printf ("Tuesday");
```

```
    break;
```

```
case 3:
```

```
    printf ("Wednesday");
```

```
    break;
```

```
case 4:
```

```
    printf ("Thursday");
```

```
    break;
```

```
case 5:
```

```
    printf ("Friday");
```

```
    break;
```

case 6:

```
printf("Saturday");  
break;
```

case 7:

```
printf("Sunday");  
break;
```

default:

```
printf("Enter the no b/w 1and 7");  
break;
```

{

return 0;

}

2. Write a C language program to check whether it is vowel or consonant using switch case statement.

```
# include <stdio.h>
```

```
int main () {
```

```
    char c;
```

```
    printf ("Enter any character : \n");
```

```
    scanf ("%c", &c);
```

```
    switch (c)
```

```
    {
```

```
        case 'a':
```

```
        case 'e':
```

```
        case 'i':
```

```
        case 'o':
```

```
        case 'u':
```

```
        case 'A':
```

```
        case 'E':
```

```
        case 'I':
```

```
        case 'O':
```

```
        case 'U':
```

```
        printf ("Vowel");
```

```
        break;
```

```
    default:
```

```
        printf ("Consonant");
```

```
}
```

```
return 0;
```

```
}
```

```
1 #include <stdio.h>
2
3 int main(){
4     char c;
5     printf("Enter any character: \n");
6     scanf("%c", &c);
7     switch(c)
8     {
9         case 'a':
10        case 'e':
11        case 'i':
12        case 'o':
13        case 'u':
14        case 'A':
15        case 'E':
16        case 'I':
17        case 'O':
18        case 'U':
19        printf("Vowel");
20        break;
21        default: printf("Consonant");
22    }
23    return 0;
24 }
25
```

```
C:\Users\mihir\Desktop\Assignment\CSL\Ass_4\vowels.exe
Enter any character:
E
Vowel
-----
Process exited after 3.924 seconds with return value 0
Press any key to continue . . .
```

Line: 25

Col: 1

Sel: 0

Lines: 25

Length: 299

Insert

Done parsing in 0.016 seconds



Type here to search



3. Write a 'C' language program to perform the multiple arithmetic operations as 1: Addition, 2: Subtraction, 3: Multiplication, 4: Division

```
#include <stdio.h>
```

```
int main () {  
    float c,d;  
    int a;
```

```
    printf ("1. Addition \n 2. Difference \n 3. Division \n 4. Multiplication");
```

```
    printf ("Enter your choice \n");
```

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

```
    printf ("Enter two numbers: \n");
```

```
    scanf ("%f %f", &c, &d);
```

```
switch (a)
```

```
{ case 1:
```

```
    printf ("The sum is = %f", c+d);
```

```
    break;
```

```
case 2:
```

```
    printf ("The difference is = %f", c-d);
```

```
    break;
```

```
case 3:
```

```
    printf ("The division is = %f", c/d);
```

```
    break;
```

```
case 4:
```

```
    printf ("The product is = %f", c*d);
```

```
    break;
```

```
default: printf ("Enter the value between 1 and 4");
```

```
}
```

```
return 0;
```

```
}
```

```
1 #include <stdio.h>
2
3 int main(){
4     float c,d;
5     int a;
6
7     printf("1.Addition\n2.Difference\n3.Division\n4.Multiplication\n");
8
9     printf("Enter Your choice \n");
10    scanf("%d",&a);
11    printf("Enter two numbers: \n");
12    scanf("%f%f", &c,&d);
13
14
15    switch(a)
16    {
17        case 1:
18
19            printf("The sum is = %f",c+d);
20            break;
21
22        case 2:
23
24            printf("The difference is = %f",c-d);
25            break;
26        case 3:
27
28            printf("The division is = %f",c/d);
29            break;
30        case 4:
31
32            printf("The product is = %f",c*d);
33            break;
34        default: printf("Enter value between 1 to 4");
35    }
36    return 0;
37 }
```

```
C:\Users\mihir\Desktop\Assignment\CSL\Ass_4\vowels.exe
1.Addition
2.Difference
3.Division
4.Multiplication
Enter Your choice
2
Enter two numbers:
60 44
The difference is = 16.000000
-----
Process exited after 9.265 seconds with return value 0
Press any key to continue . . .
```



Type here to search



4. WAP on c to find all roots of Quadratic eqⁿ ($ax^2 + bx + c$) using switch case.

Case 1: If discriminant is positive.

Case 2: If discriminant is zero.

Case 3: If discriminant is negative.

include <stdio.h>

include <math.h>

int main () {

float a, b, c;

float root1, root2, imaginary, discriminant;

printf ("Enter the value of 'a' of quad eqⁿ ($ax^2 + bx + c$): ");

scanf ("%f", &a);

printf ("Enter the value of 'b' of quad eqⁿ ($ax^2 + bx + c$): ");

scanf ("%f", &b);

printf ("Enter the value of 'c' of quad eqⁿ ($ax^2 + bx + c$): ");

scanf ("%f", &c);

$$\text{discriminant} = (b * b) - (4 * a * c);$$

switch (discriminant > 0)

{

case 1:

```

root1 = (-b + sqrt(discriminant)) / (2 * a);
root2 = (-b - sqrt(discriminant)) / (2 * a);
printf("% .2f (% root1), % .2f (% root2)", root1, root2);
break;

```

case 0 :

```

switch (discriminant < 0)
{

```

Case 1;

```

root1 = root2 = -b / (2 * a);
imaginary = sqrt(-discriminant) / (2 * a);
printf("% .2f + i% .2f (% root1), % .2f - i% .2f (% root2)",
       root1, imaginary, root2, imaginary);
break;

```

case 0 :

```

root1 = root2 = -b / (2 * a);
printf("% .2f (% root1), % .2f (% root2)", root1, root2);
break;

```

} return 0;

}

C:\Users\mihir\Desktop\Assignment\CSL\Ass_4\12312.cpp - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help



(globals)

12312.cpp

```
1 #include <stdio.h>
2 #include <math.h>
3 int main()
4 {
5     float a, b, c;
6     float root1, root2, imaginary, discriminant;
7     printf("Enter value of 'a' of quadratic equation (aX^2 + bX + c): ");
8     scanf("%f", &a);
9     printf("Enter value of 'b' of quadratic equation (aX^2 + bX + c): ");
10    scanf("%f", &b);
11    printf("Enter values of 'c' of quadratic equation (aX^2 + bX + c): ");
12    scanf("%f", &c);
13
14    discriminant = (b * b) - (4 * a * c);
15    switch(discriminant > 0)
16    {
17        case 1:
18
19            root1 = (-b + sqrt(discriminant)) / (2 * a);
20            root2 = (-b - sqrt(discriminant)) / (2 * a);
21            printf("%.2f (root 1) , %.2f (root 2)",root1, root2);
22            break;
23        case 0:
24
25            switch(discriminant < 0)
26            {
27                case 1:
28
29                    root1 = root2 = -b / (2 * a);
30                    imaginary = sqrt(-discriminant) / (2 * a);
31                    printf("%.2f + i%.2f (root 1) , %.2f - i%.2f (root 2)",root1, imaginary, root2, imaginary);
32                    break;
33                case 0:
34
35                    root1 = root2 = -b / (2 * a);
36                    printf("%.2f (root 1) , %.2f (root 2)", root1, root2);
37                    break;
38            }
39        }
40    return 0;
41 }
```

C:\Users\mihir\Desktop\Assignment\CSL\Ass_4\12312.exe

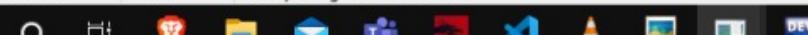
```
Enter value of 'a' of quadratic equation (aX^2 + bX + c): 4
Enter value of 'b' of quadratic equation (aX^2 + bX + c): -2
Enter values of 'c' of quadratic equation (aX^2 + bX + c): -10
1.85 (root 1) , -1.35 (root 2)
```

```
Process exited after 13.64 seconds with return value 0
```

```
Press any key to continue . . .
```

Line: 42 Col: 1 Sel: 0 Lines: 42 Length: 1233 Insert Done parsing in 0.203 seconds

Type here to search



00:25 12-05-2021

5. WAP in C to find whether a given number is even or odd using switch case.

```
# include <stdio.h>
```

```
int main()
```

```
{
```

```
    int num, remainder;
```

```
    printf("Enter any number to check even or odd");  
    scanf("%d", &num);
```

```
    remainder = num % 2;
```

```
    switch (remainder)
```

```
{
```

```
        case 0:
```

```
            printf("Number is even");  
            break;
```

```
        case 1:
```

```
            printf("Number is odd");  
            break;
```

```
}
```

```
return 0;
```

```
}
```

The screenshot shows the Dev-C++ IDE interface with a dark theme. The main window displays a C++ source code file named "23.cpp". The code prompts the user to enter a number, reads it, calculates the remainder when divided by 2, and then uses a switch statement to determine if the number is even (remainder 0) or odd (remainder 1). The output window shows the execution of the program, where it asks for input, processes it, and prints the result as "Number is Odd". The status bar at the bottom provides build information: "Done parsing in 0.031 seconds".

```
#include <stdio.h>
int main()
{
    int num,remainder;
    printf("Enter any number to check even or odd: ");
    scanf("%d", &num);
    remainder=num%2;
    switch(remainder)
    {
        case 0:
            printf("Number is Even");
            break;
        case 1:
            printf("Number is Odd");
            break;
    }
    return 0;
}
```

Line: 26 Col: 1 Sel: 0 Lines: 26 Length: 394 Insert Done parsing in 0.031 seconds