Practical 04

PS Gunathilake

30138

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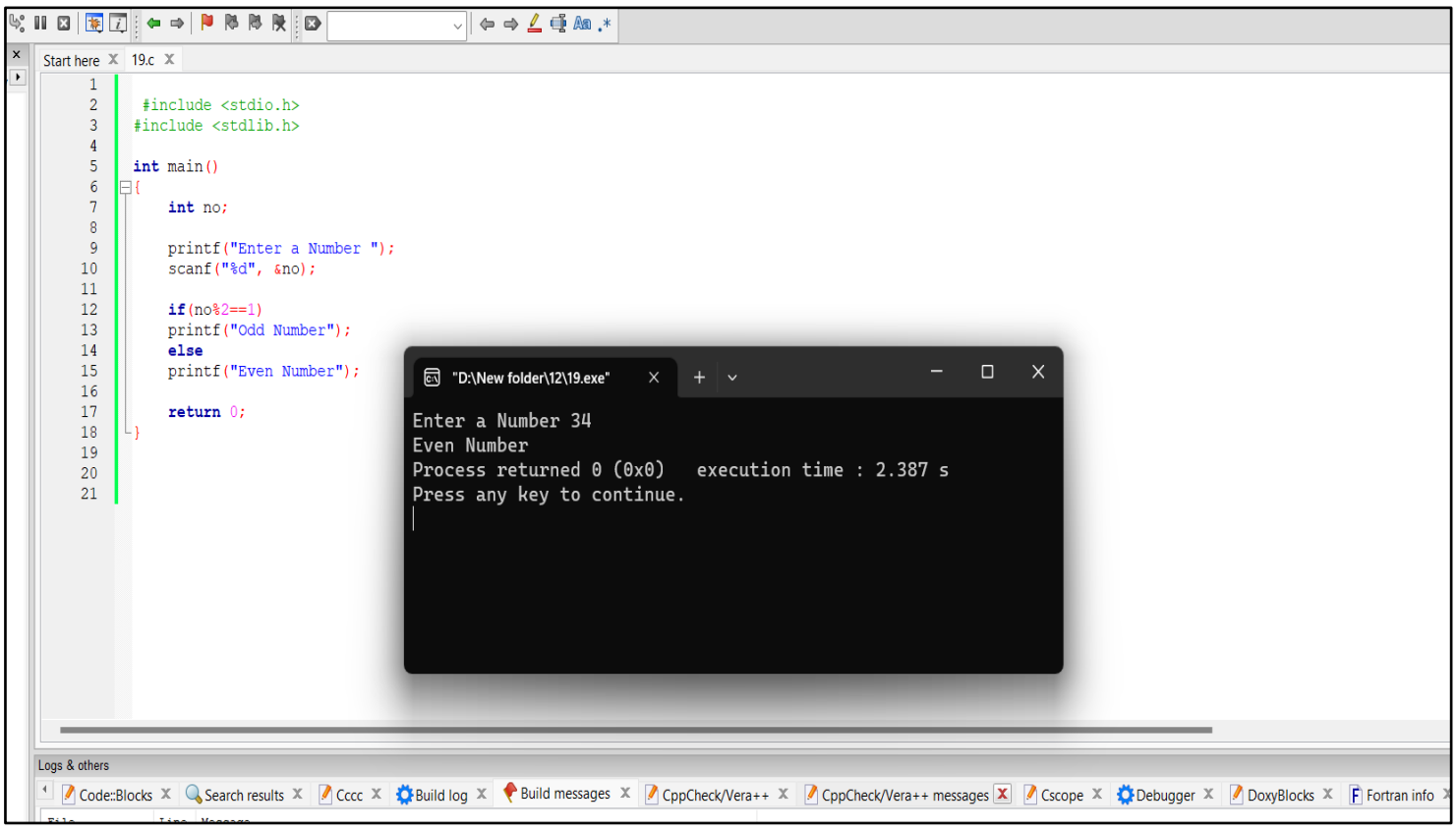
If else and Switch Statements

1) **Use If-Else and write a program that reads an integer and determines and prints if the number is even or odd. (i.e., divisible by 2)**

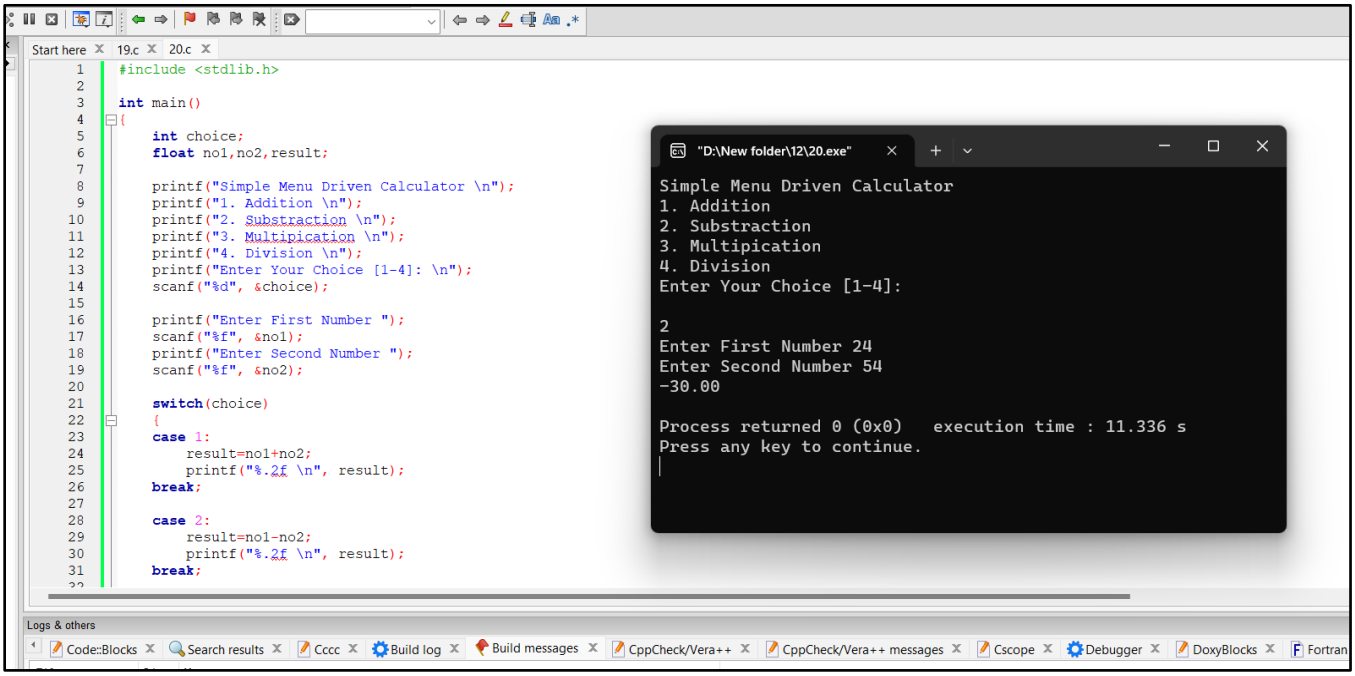
```
#include <stdio.h>
int main ()
{
   int no;
   printf("Enter a Number ");
   scanf("%d", &no);

   if(no%2==1)
   printf("Odd Number");
   else
   printf("Even Number");

   return 0;
}
```



2) Write a simple menu driven calculator to perform (+ - / *) operations. (The program must display a menu to select the desired operator.)

```
#include <stdlib.h>
int main ()
{
   int choice;
   float no1, no2, result;

   printf("Simple Menu Driven Calculator \n");
   printf("1. Addition \n");
   printf("2. Substraction \n");
   printf("3. Multipication \n");
   printf("4. Division \n");
   printf("Enter Your Choice [1-4]: \n");
   scanf("%d", &choice);

   printf("Enter First Number ");
   scanf("%f", &no1);
   printf("Enter Second Number ");
   scanf("%f", &no2);

   switch(choice)
   {
   case 1:
      result=no1+no2;
      printf("%.2f \n", result);
   break;

   case 2:
      result=no1-no2;
      printf("%.2f \n", result);
   break;
```

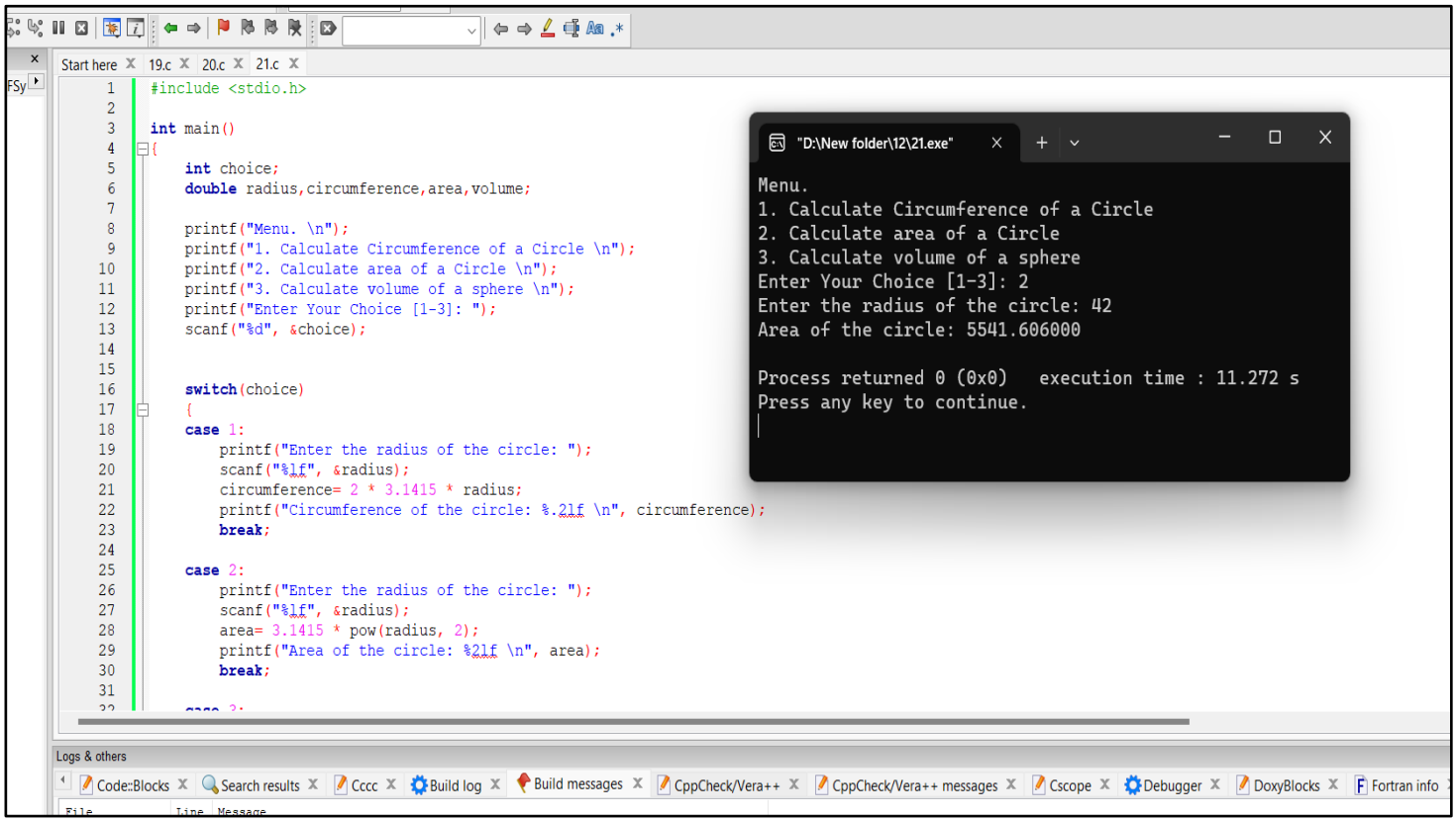
```
        case 3:
            result=no1*no2;
            printf("%.2f \n", result);
        break;
        case 4:
            if(no2 != 0)
            {
                result=no1/no2;
                printf("%.2f \n", result);
            }
            else
            {
                printf("Can Not Be Devided \n");
            }
         break;

        default:
            printf("Invalid Choice \n");
            break;
        }
        return 0;
    }
```



3) Create a text-based, menu-driven program that allows the user to choose whether to calculate the circumference of a circle, the area of a circle or the volume of a sphere. The program should then input a radius from the user, perform the appropriate calculation and display the result

```
#include <stdio.h>
int main()
{
   int choice;
   double radius,circumference,area,volume;

   printf("Menu. \n");
   printf("1. Calculate Circumference of a Circle \n");
   printf("2. Calculate area of a Circle \n");
   printf("3. Calculate volume of a sphere \n");
   printf("Enter Your Choice [1-3]: ");
   scanf("%d", &choice);

   switch(choice)
   {
   case 1:
      printf("Enter the radius of the circle: ");
      scanf("%lf", &radius);
      circumference= 2 * 3.1415 * radius;
      printf("Circumference of the circle: %.2lf \n", circumference);
      break;

   case 2:
      printf("Enter the radius of the circle: ");
      scanf("%lf", &radius);
      area= 3.1415 * pow(radius, 2);
      printf("Area of the circle: %2lf \n", area);
      break;
```

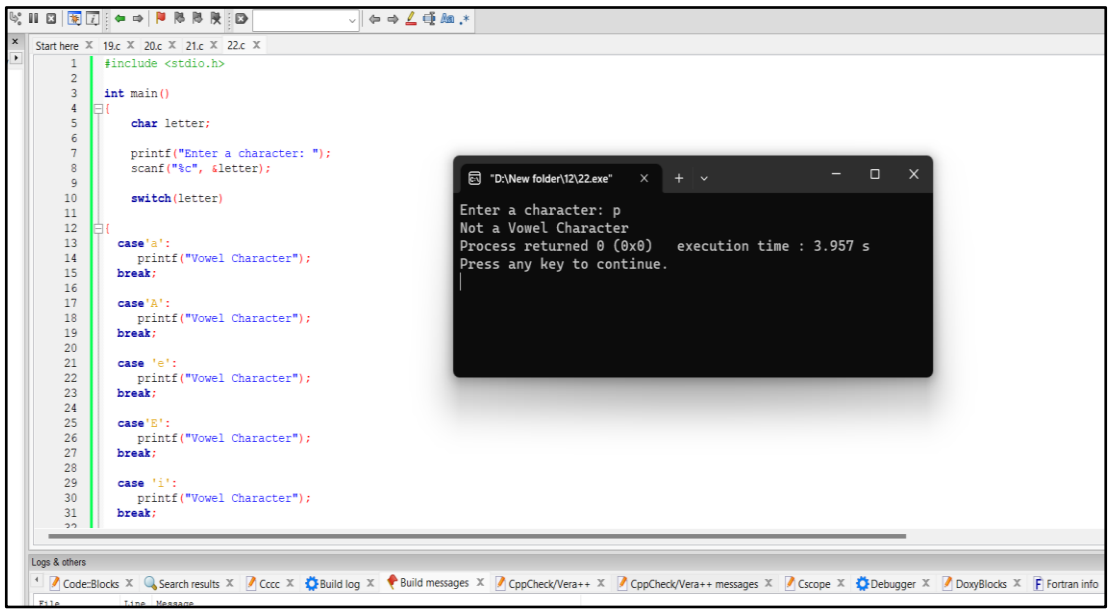
```
        case 3:
            printf("Enter the radius of the sphere: ");
            scanf("%2lf", &radius);
            volume=(4.0/3.0) * 3.1415 * radius * radius * radius;
            printf("Volume of the sphere: %2lf \n", volume);
            break;

        default:
            printf("Invalid Choice\n");
            break;
        }
        return 0;
    }
```



4) **Write a C program to read a character from the user and determine whether the given letter is vowel or not. (Use a switch statement which also includes 'default' state).**

```
#include <stdio.h>
int main ()
{
   char letter;
   printf("Enter a character: ");
   scanf("%c", &letter);
   switch(letter)
{
  case'a':
    printf("Vowel Character");
  break;

  case'A':
    printf("Vowel Character");
  break;

  case 'e':
    printf("Vowel Character");
  break;

  case'E':
    printf("Vowel Character");
  break;

  case 'i':
    printf("Vowel Character");
  break;

  case'I':
    printf("Vowel Character");
```

```
    break;

    case 'o':
      printf("Vowel Character");
    break;

    case'O':
      printf("Vowel Character");
    break;

    case 'u':
      printf("Vowel Character");
    break;

    case'U':
      printf("Vowel Character");
    break;
    default:
      printf("Not a Vowel Character");
    break;
   }
     return 0;
   }
```



5) Write a C program to enter month number and print total number of days in month using switch case. First assume that the given month belongs to a non-leap year

```
#include <stdio.h>
int main ()
{
  int monthno;
  printf("Enter a Month Number [1-12]: ");
  scanf("%d", &monthno);
  switch(monthno)

  {
case 1:
   printf("Month: January \n");
   printf("31 Days");
break;

case 2:
   printf("Month: February \n");
   printf("28 Days");
break;

case 3:
   printf("Month: March \n");
   printf("31 Days");
break;

case 4:
   printf("Month: April \n");
   printf("30 Days");
break;
```

```
case 5:
   printf("Month: May \n");
   printf("31 Days");
break;

case 6:
   printf("Month: June \n");
   printf("30 Days");
break;

case 7:
   printf("Month: July \n");
   printf("31 Days");
break;

case 8:
   printf("Month: August \n");
   printf("30 Days");
break;

case 9:
   printf("Month: September \n");
   printf("31 Days");
break;
case 10:
   printf("Month: October \n");
   printf("30 Days");
break;
case 11:
   printf("Month: November \n");
   printf("31 Days");
break;
case 12:
```

```
    printf("Month: December \n");
    printf("30 Days");
break;
default:
    printf("Invalid Month \n");
break;
}
}
```