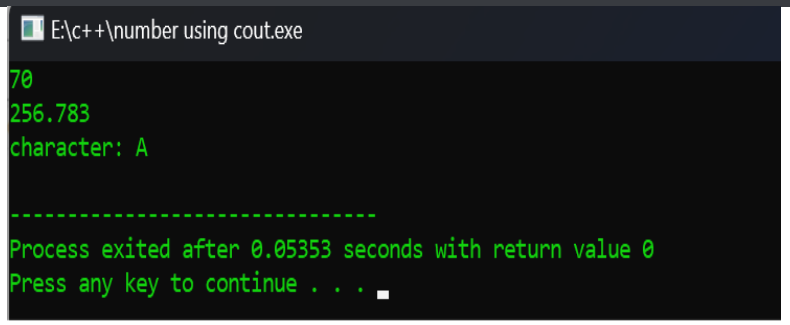
11-04-2023 **ASSIGNMENT 1 OOPS WITH C++**

Print the numbers and character variables, we use the same cout object but without using quotation marks.

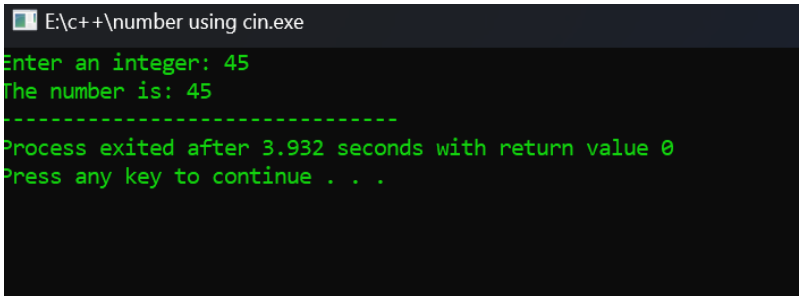
Answer:

```cpp
#include <iostream>
using namespace std;

int main() {
    int num1 = 70;
    double num2 = 256.783;
    char ch = 'A';

    cout << num1 << endl;    // print integer
    cout << num2 << endl;    // print double
    cout << "character: " << ch << endl;    // print char
    return 0
}
```



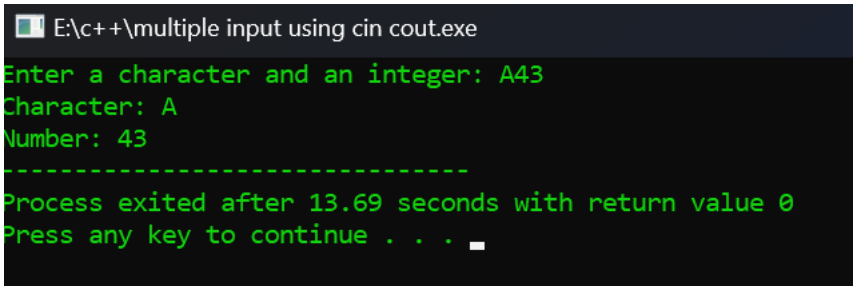
2 Print the numbers by taking input from keyboard using cin object.

```cpp
#include <iostream>
using namespace std;

int main() {
    int num;
    cout << "Enter an integer: ";
    cin >> num;   // Taking input
    cout << "The number is: " << num;
    return 0;
}
```



3. Write a program in c++ by taking multiple input from keyboard using cin object and cout object.

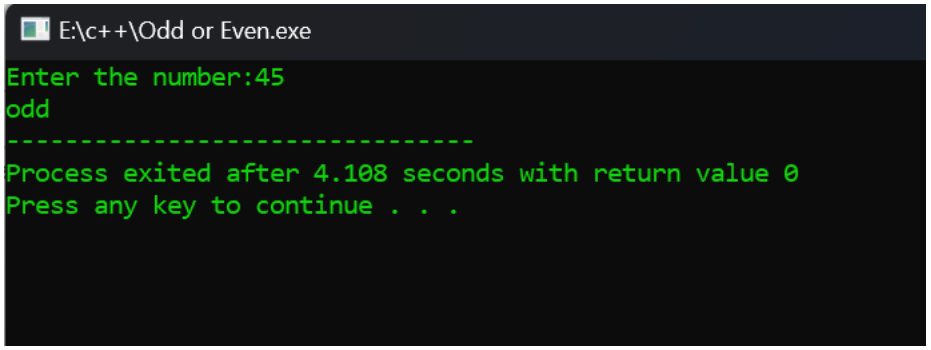
```cpp
#include <iostream>
using namespace std;

int main() {
    char a;
    int num;

    cout << "Enter a character and an integer: ";
    cin >> a >> num;

    cout << "Character: " << a << endl;
    cout << "Number: " << num;

    return 0;
}
```



4. Check if a number is even or odd.

```
#include <iostream>
using namespace std;
int main() {
int a ;
cout<<”Enter the number:”;
cin>>a;
if(a%2 == 0)  // if remainder is zero then even number
   cout<<”even”;
else      cout<<”odd”;
return 0;
}
```

OUTPUT:

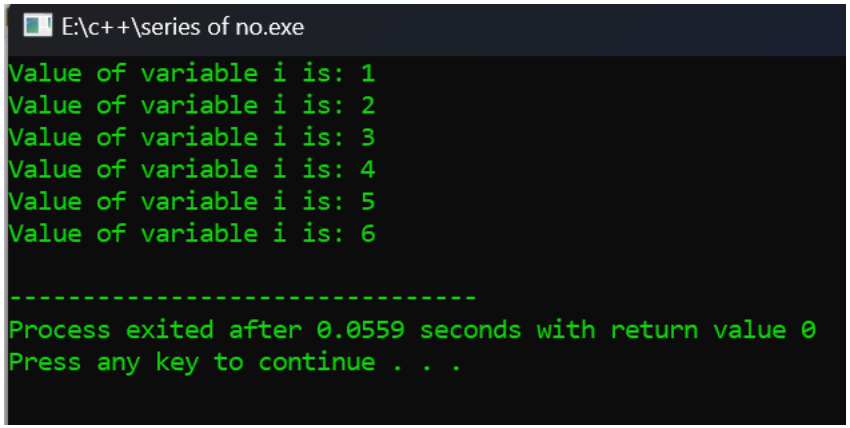


5. find error in this program

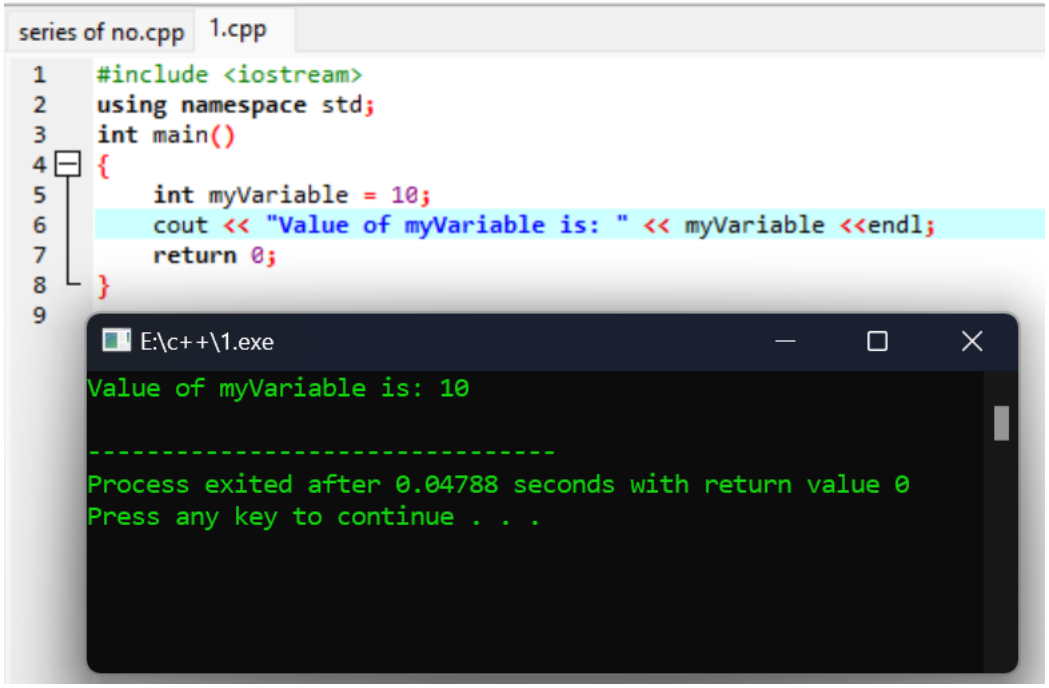
series of no.cpp

```cpp
#include <iostream>
using namespace std;
int main()
{
    int number;
    for (int i = 1; i <= 6; i++)
    {
        cout << "Value of variable i is: " << i << std::endl;
    }
    return 0;
}

```

OUTPUT:

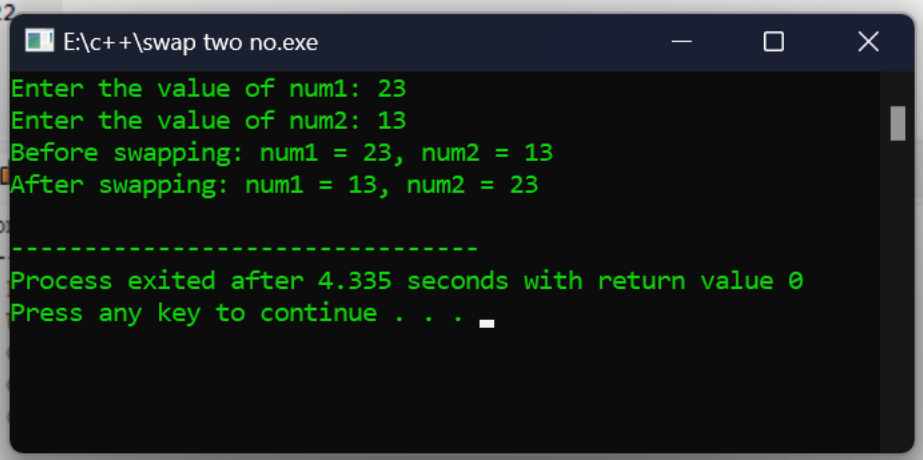


6. #include
void main()
{ int public=10;
cout<public;
}



7.Write a c++ code for swapping of two numbers .

```cpp
#include <iostream>
using namespace std;
int main() {
    int num1, num2;

    cout << "Enter the value of num1: ";
    cin >> num1;
    cout << "Enter the value of num2: ";
    cin >> num2;

    std::cout << "Before swapping: num1 = " << num1 << ", num2 = " << num2 <<endl;

    // Swap the values using a temporary variable
    int temp = num1;
    num1 = num2;
    num2 = temp;

    cout << "After swapping: num1 = " << num1 << ", num2 = " << num2 <<endl;

    return 0;
}
```



8. Wrapping data and its related functionality into a single entity is known as _____Encapsulation
a) Abstraction
b) Encapsulation
c) Polymorphism
d) Modularity

Answer: B

9. What happens if the following program is executed in C and C++?

```
#include<stdio.h>
int main()
{
   foo();
}
int foo()
{
   printf("Hello");
   return 0;
}
```

Error in both C and C++
b) Warning in both C and C++
c) Error in C++ but Warning in C
d) Error in C but Warning in C++

Answer: c
Explanation: In C++ all the functions should be declared before it is called otherwise the C++ compiler will give an error but in case of C the compiler just gives a warning and the program can be executed.

10. Write a C++ code to area of circle and area of rectangle.

AREA OF CIRCLE:

series of no.cpp | 1.cpp | swap two no.cpp | area of circle.cpp

```cpp
#include <iostream>
using namespace std;
int main() {
    double radius;

    // Input radius from user
    cout << "Enter the radius of the circle: ";
    cin >> radius;

    // Calculate area of circle
    const double pi = 3.14159265359;
    double area = pi * radius * radius;

    // Display area of circle
    cout << "Area of the circle: " << area <<endl;

    return 0;
}
```

```
E:\c++\area of circle.exe
Enter the radius of the circle: 12
Area of the circle: 452.389

--------------------------------
Process exited after 3.719 seconds with return value 0
Press any key to continue . . .
```

AREA OF RECTANGLE:

area of rectangle.cpp

```cpp
#include <iostream>
using namespace std;
int main() {
    double length, breadth;

    // Input length and breadth from user
    cout << "Enter the length of the rectangle: ";
    cin >> length;
    cout << "Enter the breadth of the rectangle: ";
    cin >> breadth;

    // Calculate area of rectangle
    double area = length * breadth;

    // Display area of rectangle
    cout << "Area of the rectangle: " << area <<endl;

    return 0;
}
```

```
E:\c++\area of rectangle.exe
Enter the length of the rectangle: 2
Enter the breadth of the rectangle: 3
Area of the rectangle: 6

--------------------------------
Process exited after 9.318 seconds with return value 0

Press any key to continue . . .
```