Bahria University, Islamabad

Department of Software Engineering

Computer Programming Lab

(Fall-2023)

Teacher: Engr. M Waleed Khan

Student : Lotfullah Muslimwal

Enrollment : 01-131232-039

Lab Journal: 05

Date: 11/1/2023

Task No:	Task Wise Marks		Documentation Marks		Total Marks (20)
	Assigned	Obtained	Assigned	Obtained	
1	3		5		
2	3				
3	3				
4	3				
5	3				

Comments:

Signature

LAB

Lab No: 06 - Lab Title Do_while loop

Introduction

Do while loop is using to first run one part od code than if condition become true the rest part will also execute and if become false remining part wont run.

Tools Used

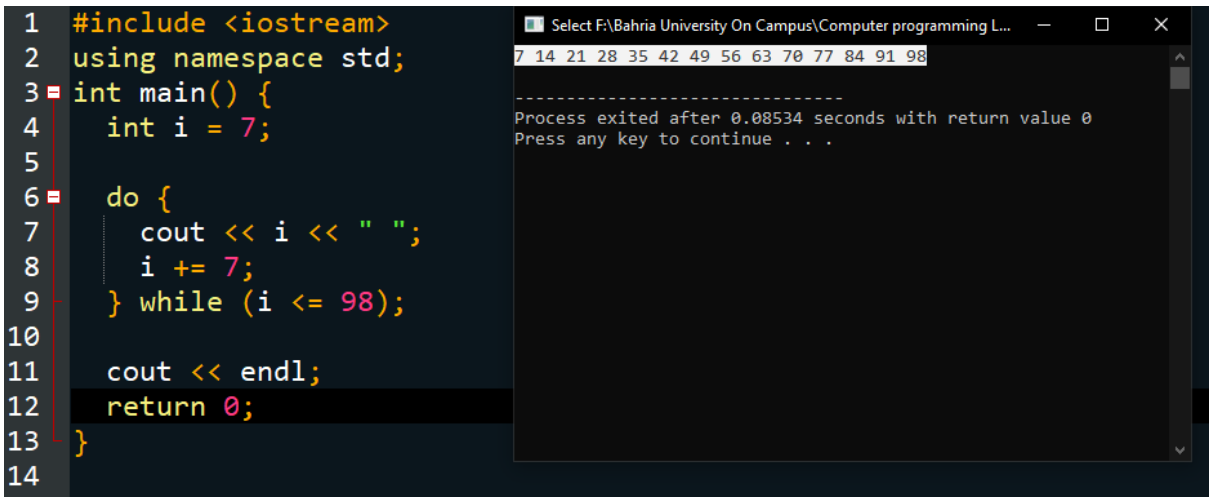
Dev C++, Visual Studio 2022

Extra Task 1: It is necessary for the program to display the following sequence of numbers: (7 14 21 28 35 42 49 56 63 70 77 84 91 98)

Code

```
#include <iostream>
using namespace std;
int main() {
 int i = 7;

 do {
  cout << i << " ";
  i += 7;
 } while (i <= 98);

 cout << endl;
 return 0;
}
```

Screenshot



Extra Task 2: It is necessary to display the following sequence of numbers: (1 2 4 8 16 32 64 128 256 512)

Code

```
#include <iostream>
using namespace std;
int main() {
 int i = 1;

 do {
  cout << i << " ";
  i *= 2;
 } while (i <= 512);
 cout << endl;
 return 0;
}
```

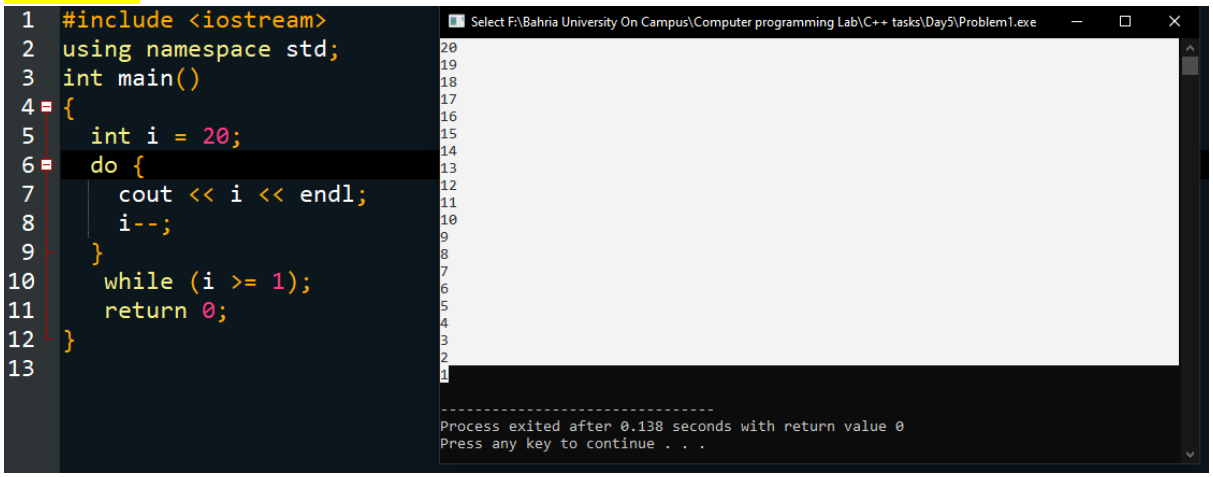
Screenshot

Problem1: Write a program to print in the descending order first twenty natural numbers on the computer screen by using “do-while” loop.

Code:

```
#include <iostream>
using namespace std;
int main()
{
 int i = 20;
 do {
  cout << i << endl;
  i--;
 }
  while (i >= 1);
  return 0;
}
```

Screenshot

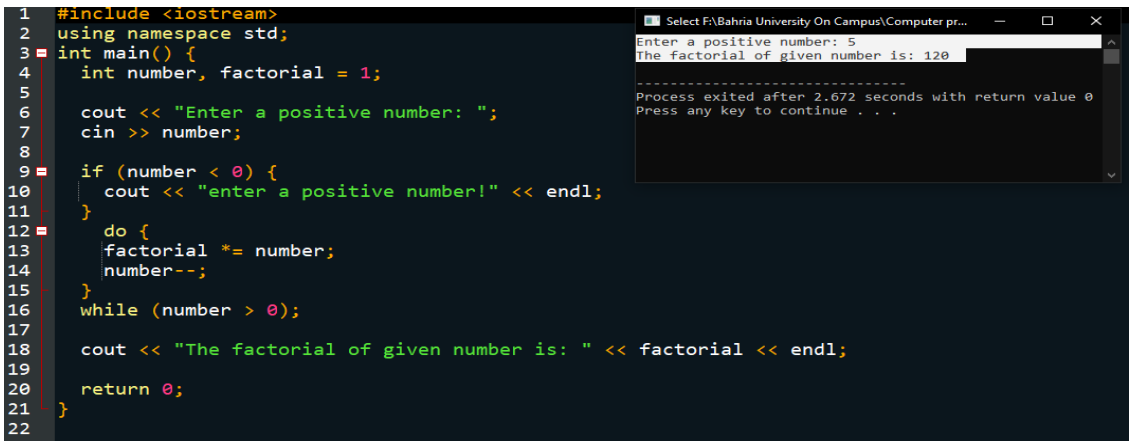


Problem2: Write a program to compute and print the factorial of the given number using the "do-while" loop.

Code

```
#include <iostream>
using namespace std;
int main() {
 int number, factorial = 1;

 cout << "Enter a positive number: ";
 cin >> number;

 if (number < 0) {
  cout << "enter a positive number!" << endl;
 }
  do {
  factorial *= number;
  number--;
 }
 while (number > 0);

 cout << "The factorial of given number is: " << factorial << endl;

 return 0;
```

Screenshot

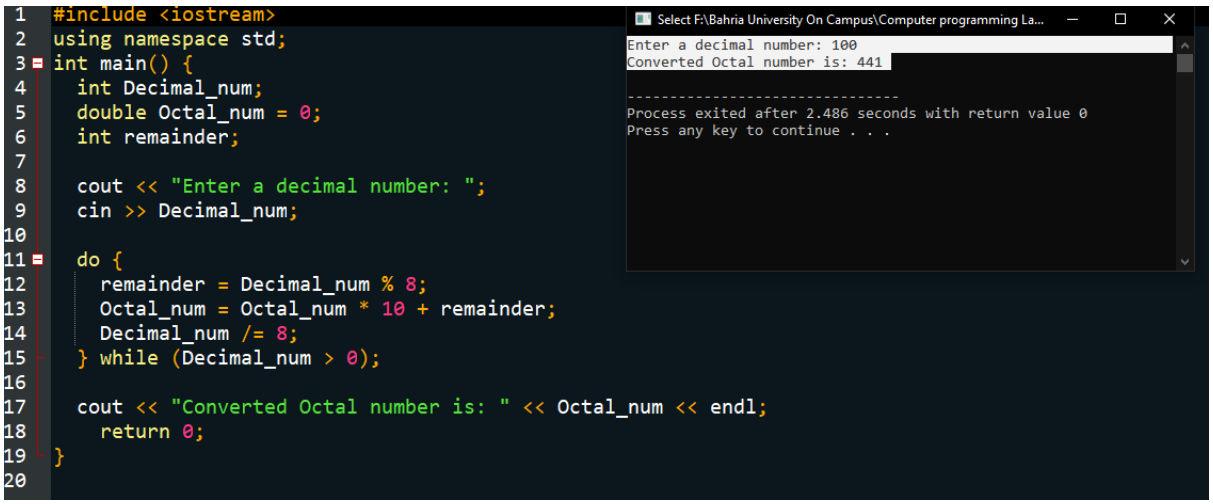


Problem3: Write a program to convert the given decimal number into octal number using the "do-while" loop.

Code

```
#include <iostream>
using namespace std;
int main() {
  int Decimal_num;
  double Octal_num = 0;
  int remainder;

  cout << "Enter a decimal number: ";
  cin >> Decimal_num;

  do {
    remainder = Decimal_num % 8;
    Octal_num = Octal_num * 10 + remainder;
    Decimal_num /= 8;
  } while (Decimal_num > 0);

  cout << "Converted Octal number is: " << Octal_num << endl;
        return 0;
}
```

Screenshot

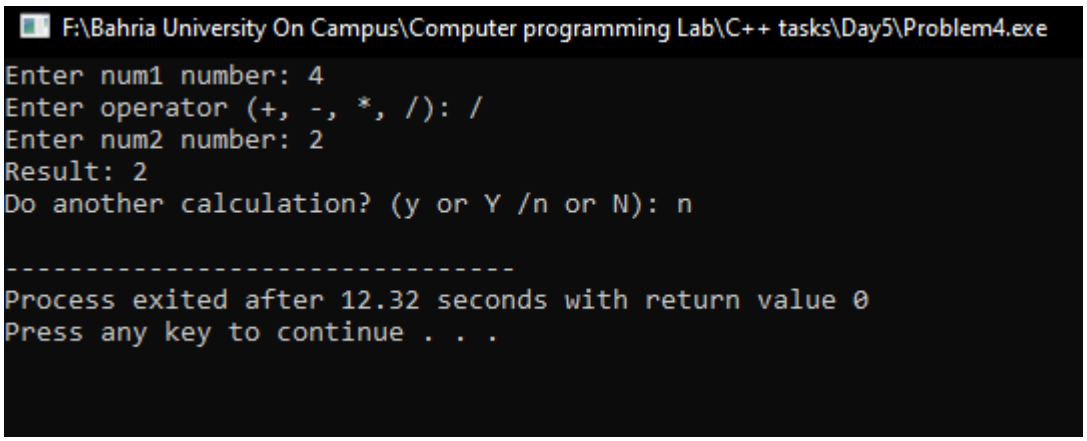


Problem4: Create the equivalent of a four-function calculator. The program should request the user to enter a number, an operator, and another number. (Use floating point.)

Code:

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

int main() {
   char choice;
   do {
      float num1, num2, result;
      char operation;

      cout << "Enter num1 number: ";
      cin >> num1;
      cout << "Enter operator (+, -, *, /): ";
      cin >> operation;
      cout << "Enter num2 number: ";
      cin >> num2;

      switch (operation) {
         case '+':
            result = num1 + num2;
            break;
         case '-':
            result = num1 - num2;
            break;
         case '*':
            result = num1 * num2;
            break;
         case '/':
            if (num2 != 0) {
               result = num1 / num2;
            } else {
               cout << "can't divide by 0!" << endl;
               continue;
            }
            break;
         default:
            cout << "operator not avilable" << endl;
            continue;
      }
                        cout << "Result: " << result <<
endl;
      cout << "Do another calculation? (y or Y /n or
N): ";
      cin >> choice;
   } while (choice == 'y' || choice == 'Y');
   return 0;
}
```

Screenshot



Conclusion

Understanding of basic concept of do-while loop. In “do-while” loop, the body of loop comes before the test condition. The body of the loop is executed and then the condition is tested