Bahria University, Islamabad

Department of Software Engineering

Computer Programming Lab

(Fall-2023)

Teacher: Engr. M Waleed Khan

Student : Muhammad Hamza

Enrollment : 01-131232-057

Lab Journal: 05

Date: 29-10-22023

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: 05 – Do-While loop

Introduction:

Loops are repetitive structures and we use them if we want to repeat a particular set of statements in a particular way.

Tools Used

Visual studio.

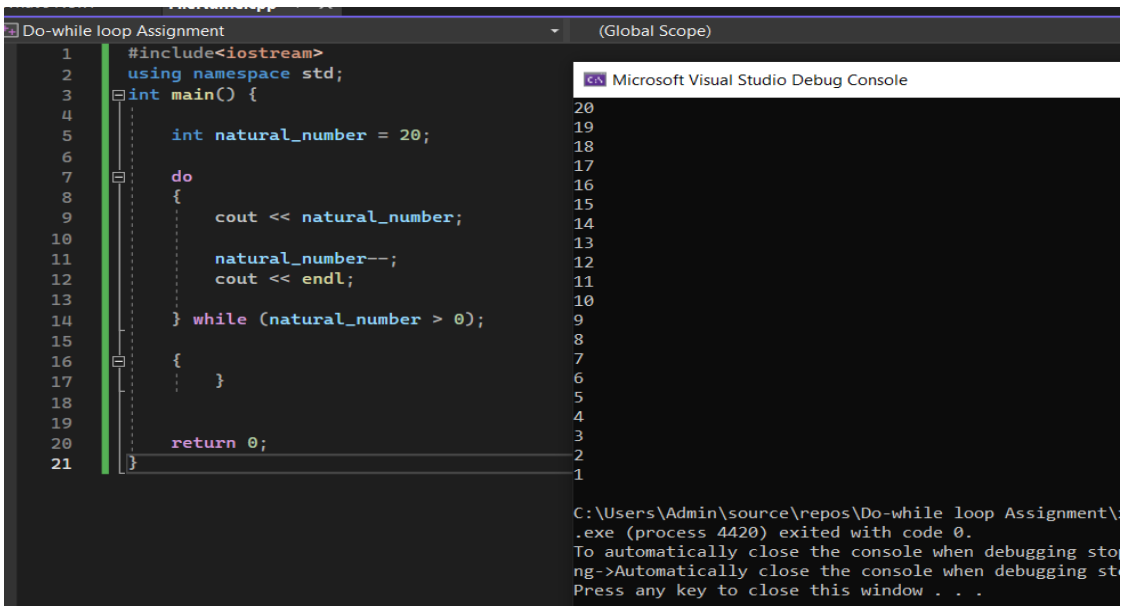
Problem 1:

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 natural_number = 20;

	do
	{
		cout << natural_number;

		natural_number--;
		cout << endl;

	} while (natural_number > 0);

	{
		}


	return 0;
}
```

Screenshot:



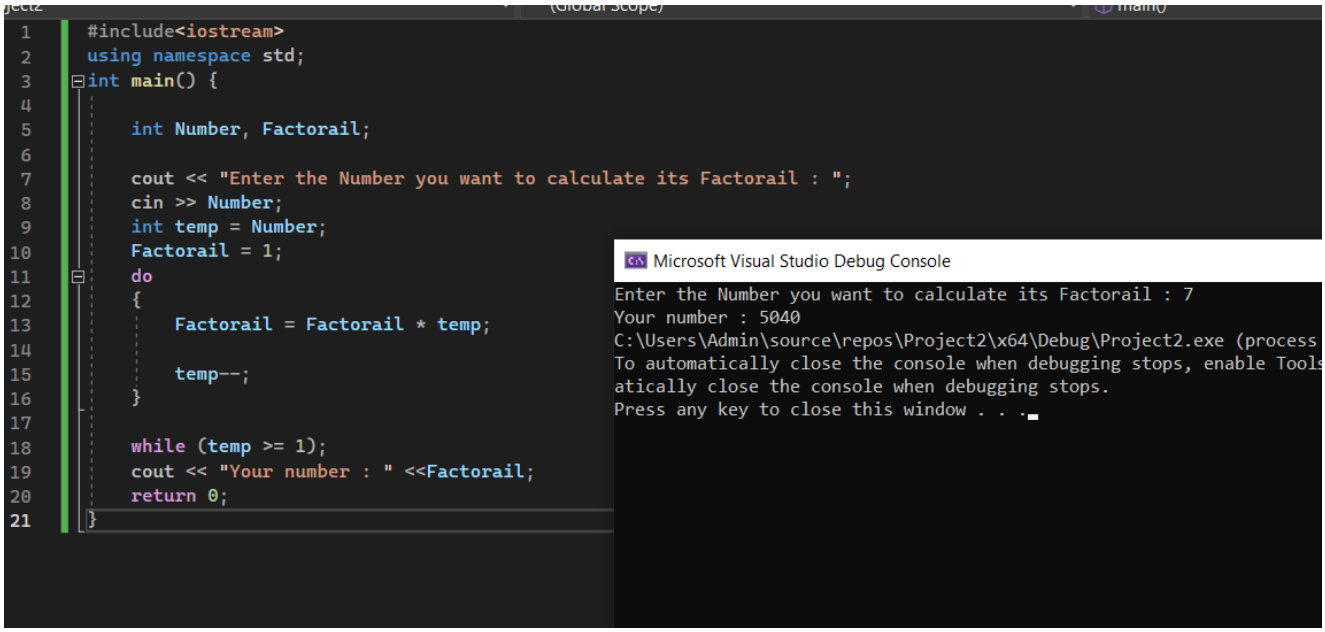
Problem 2:

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, Factorail;

	cout << "Enter the Number you want to calculate its Factorail : ";
	cin >> Number;
	int temp = Number;
	Factorail = 1;
	do
	{
		Factorail = Factorail * temp;

		temp--;
	}

	while (temp >= 1);
	cout << "Your number : " <<Factorail;
	return 0;
	}
```

Screenshot:



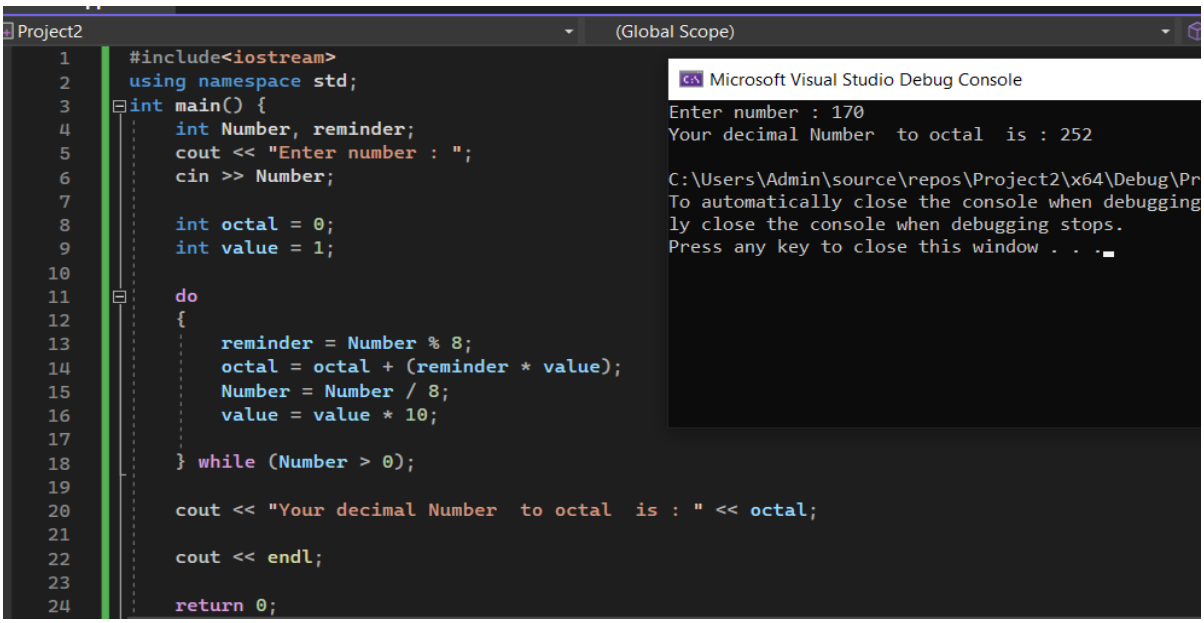
Problem 3:

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 Number, reminder;
	cout << "Enter number : ";
	cin >> Number;

	int octal = 0;
	int value = 1;

	do
	{
		reminder = Number % 8;
		octal = octal + (reminder * value);
		Number = Number / 8;
		value = value * 10;

	} while (Number > 0);

	cout << "Your decimal Number  to octal  is : " << octal;

	cout << endl;

	return 0;
	}
```

Screenshot:



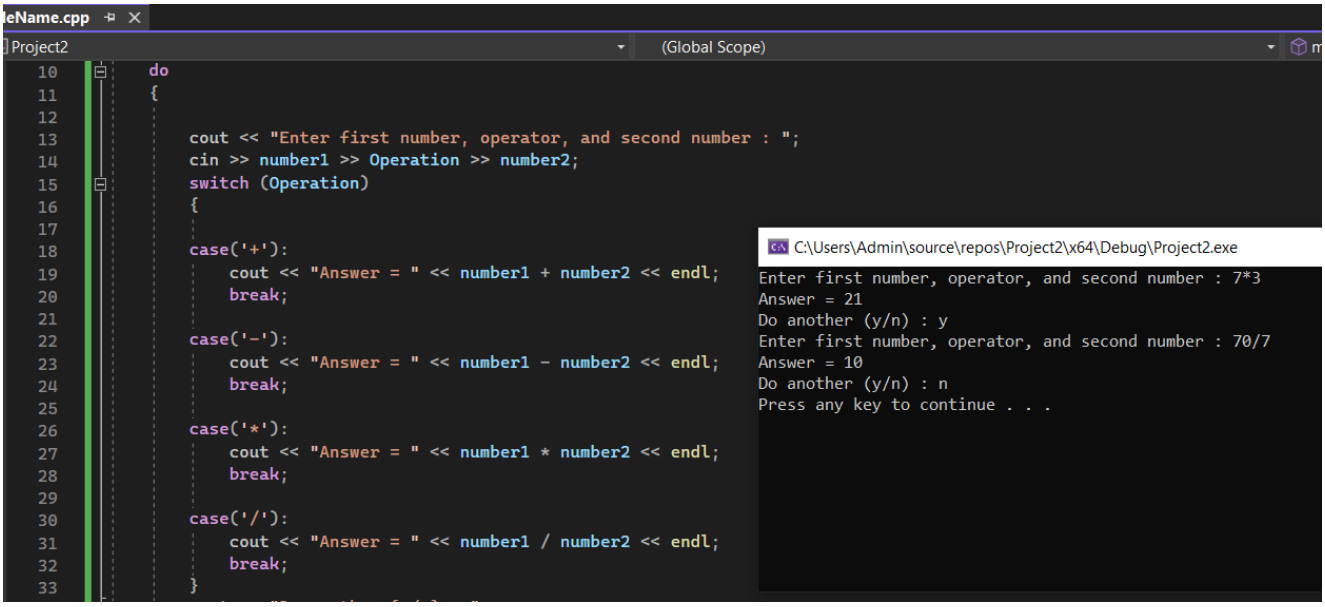
Problem 4:

Four-Function Calculator.

Code:

```
#include<iostream>
using namespace std;
int main()
{
	float number1, number2;
	char Choice = 'y' / 'n';
	char Operation;


	do
	{

		cout << "Enter first number, operator, and second number : ";
		cin >> number1 >> Operation >> number2;
		switch (Operation)
		{

		case('+'):
			cout << "Answer = " << number1 + number2 << endl;
			break;

		case('-'):
			cout << "Answer = " << number1 - number2 << endl;
			break;

		case('*'):
			cout << "Answer = " << number1 * number2 << endl;
			break;

		case('/'):
			cout << "Answer = " << number1 / number2 << endl;
			break;
		}
		cout << "Do another (y/n) : ";
		cin >> Choice;

	} while (Choice == 'y');
	system("pause");
	return 0;
}
```

Screenshot:



EXTRA TASK

Task No 1:

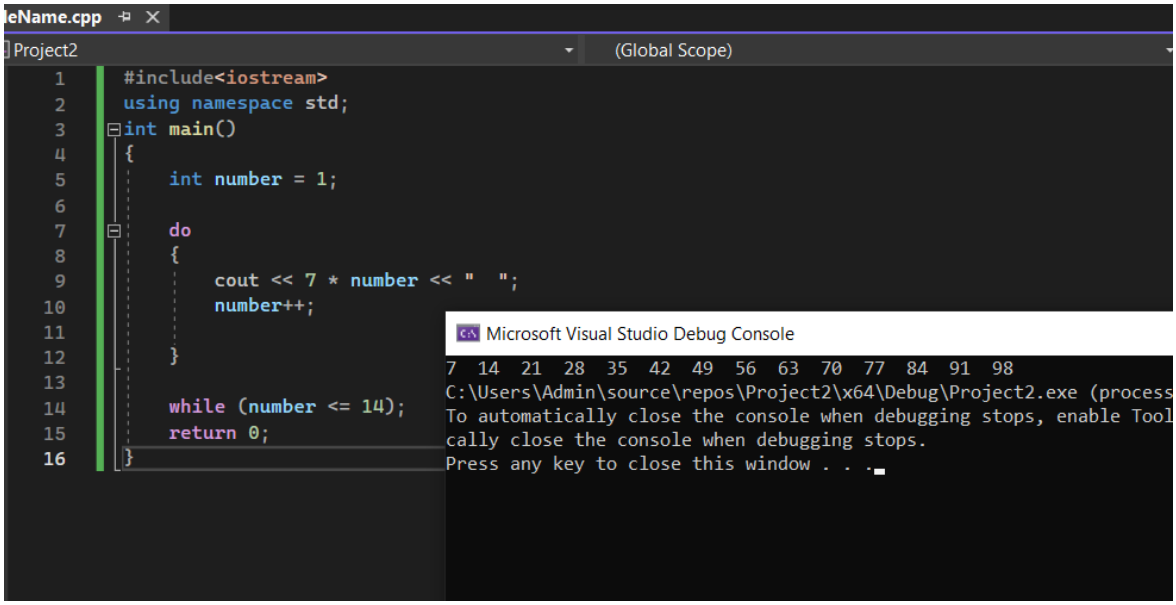
It is necessary for the program to display the following sequence of numbers:

7 14 21 28 35 42 49 56 63 70 77 84 91 98.

Code:

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

	do
	{
		cout << 7 * number << "  ";
		number++;

	}

	while (number < 15);
	return 0;
}
```

Screenshot:



Task No 2:

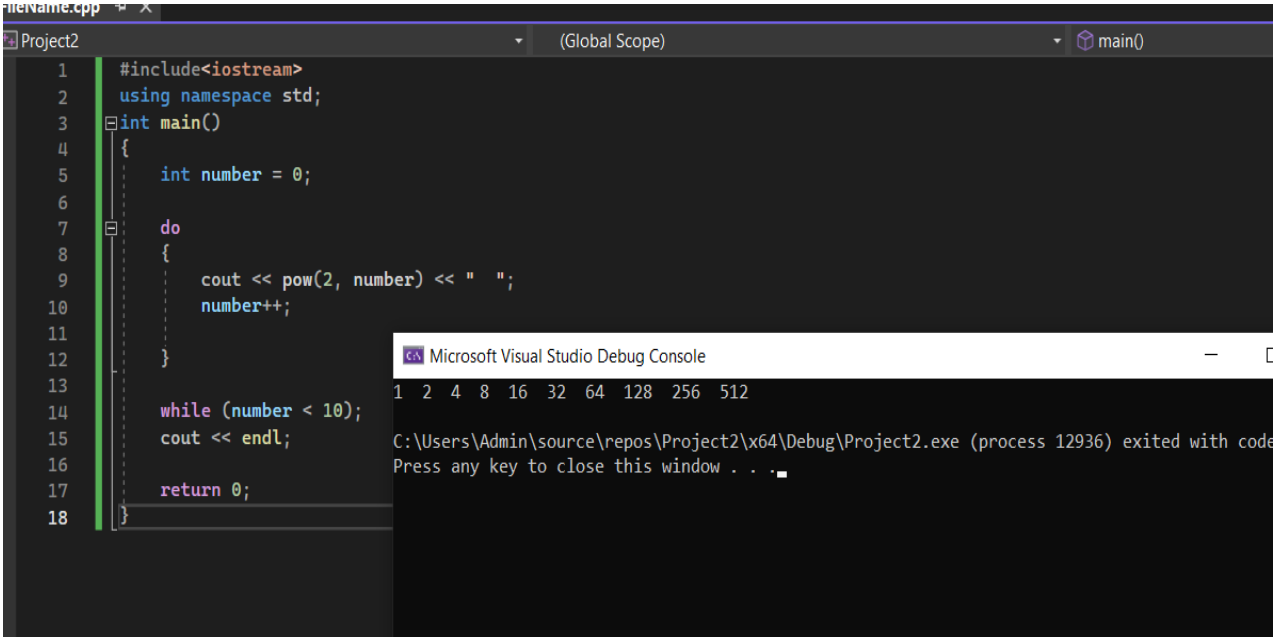
It is necessary to display the following sequence of numbers

1 2 4 8 16 32 64 128 256 512.

Code:

```
    #include<iostream>
using namespace std;
int main()
{
	int number = 0;

	do
	{
		cout << pow(2, number) << "  ";
		number++;

	}

	while (number < 10);
	cout << endl;

	return 0;
}
```

Screenshot:



Conclusion:

Understanding the basic concept of do-while loo. In do-while loop they will executed once if condition will false if condition is true they will run according to condition. The body of the loop is executed and then the condition is tested.