



Sukkur IBA University



Faculty of Computer Science

Fundamentals of Programming (Fall-2019)

Lab 07 – Switch, Nested Loops

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Objective of Lab No. 7:

- Understanding switch statement
- Understanding nested loop working

Exercises

Question 1 (Switch Statement)

Write a program to ask user two double inputs **num1**, **num2** and operator **op** (+,/,*, -). Perform **op** operation on **num1** and **num2**. Perform using **Switch statement**.

Input	Output
Num1 = 8 Num2 = 6 Op = +	Sum is: 14
Num1 = 8 Num2 = 6 Op = -	Difference is: 2
Num1 = 2 Num2 = 3 Op = *	Product is: 6
Num1 = 2 Num2 = 3 Op = /	Division is: 0.66
Num1 = 2 Num2 = 0 Op = /	Cannot divide by zero

Question 2 (Nested Loops)

Write a program to ask user input **rows**, **cols**. Iterate loop to perform following task:

- Outer loop should iterate from **1 to rows**.
- Inner loop should iterate from **1 to cols**.
- Print **'0'** in inner loop with spaces. (e.g. `cout<<0<<" "`);
- Print **newline** in outer loop.

Input	Output
Rows = 2 Cols = 3	0 0 0 0 0 0
Rows = 3 Cols = 1	0 0 0
Rows = 1 Cols = 3	0 0 0
Rows = 4 Cols = 4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Question 3 (Modify question2)

Modify question 2 to achieve following output:

Input	Output
Rows = 2 Cols = 3	1 2 3 1 2 3
Rows = 3 Cols = 1	1 1 1
Rows = 1 Cols = 3	1 2 3
Rows = 4 Cols = 4	1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

Question 4 (Modify question2)

Modify question 2 to achieve following output:

Input	Output
Rows = 2 Cols = 3	1 1 1 2 2 2
Rows = 3 Cols = 1	1 2 3
Rows = 1 Cols = 3	1 1 1
Rows = 4 Cols = 4	1 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4

Question 4 (Modify question2)

Modify question 2 to achieve following output:

Input	Output
Rows = 2 Cols = 3	1 2 3 4 5 6
Rows = 3 Cols = 1	1 2 3
Rows = 1 Cols = 3	1 2 3
Rows = 4 Cols = 4	1 2 3 4 5 6 7 8 9 10 11 12

	13 14 15 16
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Question 5 (Modify question2)

Modify question 2 to take only one input **n** and achieve following output:

Input	Output
N = 3	1 1 2 1 2 3
N = 5	1 1 2 1 2 3 1 2 3 4 1 2 3 4 5

Question 5 (Modify question4)

Modify question 4 to take only one input **n** and achieve following output:

Input	Output
N = 3	1 2 3 1 2 1
N = 5	1 2 3 4 5 1 2 3 4 1 2 3 1 2 1

Question 6 (Modify question5)

Modify question 5 to take only one input **n** and achieve following output:

Input	Output
N = 3	1 2 3 1 2 1
N = 5	1 2 3 4 5 1 2 3 4 1 2 3 1 2 1