

National University of Computer and Emerging Sciences
Chiniot-Faisalabad Campus



Programming Fundamentals - Lab
Week 3 – Lab 2

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Department of Computer Science

Instructions

1. Attempt all tasks on paper (hard form). Then scan it. And share it on google classroom portal.
2. Make a PDF document with the convention “**ROLLNO_ LAB#_ SECTION**” and put all your source code and snapshots of its output in it.
3. **Plagiarism is strictly prohibited**, if you take a code snippet off the internet, mention its reference.
4. Time management is very important. You will be given extra 05 minutes for Submission.
5. **50% deduction** for Late/Wrong Submission.
6. Each task carries different weightage according to its complexity.
7. Do not discuss solutions with one another. Copying the solution from any source can lead to ZERO marks.

Lab Tasks

Task 1

Marks 1

Create a flowchart and pseudocode/algorithm to print ‘Hello World’.

Task 2

Marks 2

Create a flowchart and pseudocode/algorithm to check the greater number.

Hint: input two numbers then compare them.

Task 3

Marks 2

Create a flowchart and pseudocode/algorithm to add any number 5 times and print its sum.

Hint: Use iterations (loops), input a number, stores its sum and at the end display its sum

Task 4

Marks 2

Create a flowchart and pseudo/algorithm to check if the number is even or odd.

Hint: If number is exactly divided by 2 it is even otherwise off. you can use % operator.

e.g., 8 is even. 5 is odd.

Task 5**Marks 2**

Create a flowchart and pseudocode/algorithm to input a number and check whether it is a prime or not.

Hint: a whole number greater than 1 that cannot be divided by any whole number (2, 3, 5, 7, 11 are few examples of prime number) .

"prime numbers are very useful in cryptography"

Task 6**Marks 3**

Create a flowchart and pseudocode/algorithm to pass Programming Fundamentals - Lab.

Marks Distribution:

- Lab- 40 Marks
- Final Exam- 40 Marks
- Project- 15 Marks
- Class Participation- 05 Marks
- Total- 100 Marks

Apply the grading scheme on total marks and show the relevant grades.

<30 - F

30 to 39 - D

40 to 44 - D+

45 to 49 - C-

50 to 54 - C

55 to 59 - C+

60 to 64 - B-

65 to 69 - B

70 to 74 - B+

75 to 79 - A-

80 to 85 - A

>85 - A+

Task 7**Marks 3**

Create a flowchart and pseudocode/algorithm to print the sum of even numbers from 1 to 20.

Hint: 2+4+6+8+10+12+14+16+18+20. Use iterations (loop).

Task 8**Marks 3**

Design a flowchart and pseudocode/algorithm for an activity that takes a user's input (1-7) and displays the corresponding day of the week.

- 1- Monday
- 2- Tuesday
- 3- Wednesday
- 4- Thursday
- 5- Friday
- 6- Saturday
- 7- Sunday

Task 9	Marks 3
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Create a flowchart and pseudocode/algorithm for a loop that continually asks a user for input until they provide a specific keyword to exit the loop.

Task 10	Marks 4
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Create a flowchart and pseudocode/algorithm for an activity, that asks user for a number and checks if it's even or odd. If it's even, use a loop to print all even numbers from 2 to the user's input. If it's odd, use a loop to print all odd numbers from 1 to the user's input. e.g., user enters 7. As we know 7 is odd number, so we have to calculate all odd numbers from 1-7. $1+3+5+7$

"Coding like poetry – should be short and concise"

Cheers ☺