National University of Computer and Emerging Sciences

Lab Manual

for

Programming Fundamentals

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Section	PF 1H1 & 1H2
Semester	Fall 2022

Department of Computer Science
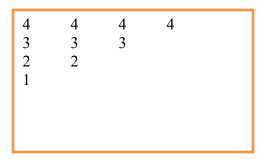FAST-NU, Lahore, Pakistan

Problem 1:

Write a program in C++ to find the frequency of each digit in a given integer.

Problem 2:

Write a program that displays the following using while loop.

Output:

```
4    4    4    4
3    3    3
2    2
1
```

Problem 3:

Write a code in C++ that generates the following output using do while.

Output:

```
1 1
1 2
1 3
2 1
2 2
2 3
3 1
3 2
3 3
```

Problem 4:

Write a C++ program that displays the pyramid star pattern using for loop.

Output:
```
   *
  ***
 *****
*******
```

Problem 5:

Write a C++ program that displays the heart pattern with your name message inside it using for loop.

Output