National University of Computer and Emerging Sciences

# Software Re-engineering (SE4001)

Date: April 24th 2024

**Course Instructor(s)**

Dr. Syed Muazzam Ali Shah

# Quiz-III –(BSE-8B)

**Total Time: 30 minutes**

**Total Marks: 10**

**Total Questions**: **02**

**Semester:** SP-2024

**Campus:** Karachi

**Dept:** Software Engineering

| Student Name | Roll No | Section | Student Signature |
|---|---|---|---|
| _____ | _____ | _____ | _____ |

***Q 1: Select the most appropriate option from the following multiple-choice questions. (5 marks)***

1. Which one of the following is not among the six reverse engineering objectives as identified by Chikofsky and Cross II:
   a. Generating alternative views
   b. Recovering lost information
   **c. Analysis and planning**
   d. Synthesizing higher levels of abstractions
2. The two major tasks within redocumentation stage are analyzing new source code and creating documentation. **[True/False]**
3. Representation of the system and the external data is part of which one of the following stages of phase reengineering model.
   a. Target system testing
   **b. Renovation**
   c. Acceptance and system transition
   d. Redocumentation
4. Low level reverse engineering means to create abstractions of source code in the form of design, architecture and/or documentation. **[True/False]**
5. The team which is responsible to setup a reverse engineering process must need to acquire the information about forward engineering activities. This task is associated with which stage of the GMT paradigm.
   **a. Goals**
   b. Models
   c. Tools
   d. None of the above

***Q 2:* Using lexical analysis generate all possible valid tokens, specific their categories, and also specify the number of total valid token using the following piece of source code. *(5 marks)***

```
#include <stdio.h>
#include <iostream.h>
int maximum(int x, int y) {

    // This will compare 2 numbers
    if (x > y)
           return x;
    else {
           return y;
        }
    }
```

| Lexeme | Token |
|---|---|
| int | Keyword |
| maximum | Identifier |
| ( | Operator |
| int | Keyword |
| x | Identifier |
| , | Separator |
| int | Keyword |
| y | Identifier |
| ) | Operator |
| { | Operator |
| If | Keyword |
| ( | Operator |
| x | Identifier |
| > | Operator |
| y | Identifier |
| ) | Operator |
| return | Keyword |
| x | Identifier |
| ; | Separator |
| else | Keyword |
| { | Operator |
| return | Keyword |
| y | Identifier |
| ; | Separator |
| } | Operator |
| } | Operator |

Total Number of Valid tokens: 26