Note: Add a folder and name it as **module1\_tla** (tla means Teaching Learning

Activities) before you commit your answer/document. Commit your

answer/document on your remote repository that shared to your instructor

github account.

A. ENGAGE: Reflection

Misconception Check

How the OOP works in arrays, table, string and files manipulation?

An array is a container object that holds a fixed number of values of a single type. The length of an array is established when the array is created. ... Each item in an array is called an element, and each element is accessed by its numerical index. n a real-world programming situation, you'd probably use one of the supported looping constructs to iterate through each element of the array, rather than write each line individually. Like declarations for variables of other types, an array declaration has two components: the array's type and the array's name. An array's type is written as type[], where type is the data type of the contained elements; the square brackets are special symbols indicating that this variable holds an array. The size of the array is not part of its type (which is why the brackets are empty). An array's name can be anything you want, provided that it follows the rules and conventions as previously discussed in the naming section. As with variables of other types, the declaration does not actually create an array it simply tells the compiler that this variable will hold an array of the specified type.

Array objects encapsulate a group of variables. The variables don't have individual names. They are accessed using positive integer index values. The integer indices of a Java array object always extend from 0 to (n-1) where n is the length of the array encapsulated in the object. A big advantage with table-oriented programming is its ability to create data-aware GUI components. If you are making a Swing application that shows and/or updates data from a database, JTables, JComboBoxes and JFormattedTextFields connected to the database can save a lot of time in development. For Web applications, a data-aware tag library would also speed development. None of the mainstream persistence frameworks have this possibility, but data-aware components fit very well into a table-oriented framework. Strings in Java • Strings are implemented as two classes in Java • java.lang.String provides an unchangeable String object • java.lang.StringBuffer provides a String object that can be amended Strings • Strings are fundamental part of all computing languages. • At the basic level, they are just a data structure that can hold a series of characters • However, strings are not implemented as a character array in Java as in other languages. A string is a data type used in programming, such as an integer and floating point unit, but is used to represent text rather than numbers. It is comprised of a set of characters that can also contain spaces and numbers.

B. EXPLORE: other class and methods

1. List down the other class and methods of string, file, array and table manipulation

on the table below.

STRING ARRAY TABLE FILE

CLASS METHOD CLASS METHOD CLASS METHOD CLASS METHOD

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | |
| STRING | | ARRAY | | TABLE | | FILE | |
| CLASS | METHOD | CLASS | METHOD | CLASS | METHOD | CLASS | METHOD |
| java.lang.String | charAt()  contains()  getChars()  indexOf()  replace()  toCharArray()  toLowerCase()  toUpperCase()  Length() |  | -add()  -add()  -addAll()  -clear()  -clone()  -contains()  -ensure  Capacity()  -get()  -indexOf()  -isEmpty() |  | setCellSelectionEnabled()   setColumnSelectionAllowed() setRowSelectionAllowed()  getRowCount()  myJTable.print()  getValueAt  setValueAt  getColumnCount() |  | canRead()  canWrite()  createNewFile()  delete()  exists()  equals()  getPath()  isFile()  isHidden()  canExecute() |
|  | | | | | | | |
| **C.EXPLAIN: Reading**  To understand the module activities, read and practice the reading materials. | | | | | | | |

D.ELABORATE: Coding

Write a java program that uses OOP technique:

1. Create another class and methods that returning a charAt() and indexOf()

manipulated String.

2. Create another class and methods that convert and return as ArrayList from

array data.

E.EVALUATE

Self-Assessment.

Kindly check (✔) the box of your answer for each question. In this way, we will be

able to assess how much we have learned and what are the things that needs to be

improved.

|  |  |  |  |
| --- | --- | --- | --- |
| Questions | YES | NO | MAYBE |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Did I work hard on this module? | ✔ |  |  |
| 2. Did I understand what my teacher asked me to do? | ✔ |  |  |
| 3. Did I spend enough time to finish answering this  module? | ✔ |  |  |
| 4. Did I make good use of available resources? | ✔ |  |  |
| 5. Did I check/ review my work for possible errors? | ✔ |  |  |
| 6. Did I learn something in this module? | ✔ |  |  |
| 7. Did I ask questions if I needed help? | ✔ |  |  |
| 8. Did I read the instructions carefully? | ✔ |  |  |
| 9. Did I set high standards for myself? | ✔ |  |  |
| 10. Did I meet the success criteria? |  |  | ✔ |