**Modern Programming Languages**

Assignment No. 2

**Rules**

1. Deadline: 17 October 2023
2. Only hand-written assignment is acceptable
3. Copy-paste not allowed
4. ChatGPT and other online tools are not allowed to finish the assignment

**Question No. 1** Write a Java program to create a class called "Faculty" with a name and Designation attribute. Create two instances of the "Person" class, set their attributes using the constructor, and print their name and age.

**Question No. 2** Write a Java program to create a class called "BankAccount" with a collection of accounts and methods to add and remove accounts, and to deposit and withdraw money. Also define a class called "Account" to maintain account details of a particular customer.

**Question No. 3** Take an array of 10 elements. Split it into middle and store the elements in two dfferent arrays. E.g.-  
**INITIAL array :**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 58 | 24 | 13 | 15 | 63 | 9 | 8 | 81 | 1 | 78 |

After spliting :

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 58 | 24 | 13 | 15 | 63 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 9 | 8 | 81 | 1 | 78 |

**Question No. 4**  Write a program that would print the information (name, year of joining, salary, address) of three employees by creating a class named 'Employee'. The output should be as follows:

|  |  |  |
| --- | --- | --- |
| Name | Joining Year | Address |
| Saif | 2012 | Islamabad |
| Abdullah | 2021 | Lahore |
| Farooq | 2022 | Karachi |

**Question No. 5** Take an array of length n where all the numbers are nonnegative and unique. Find the element in the array possessing the highest value. Split the element into two parts where first part contains the next highest value in the array and second part hold the required additive entity to get the highest value. Print the array where the highest value get splitted into those two parts.

**Sample input:** 4 8 6 3 2

**Sample output:** 4 6 2 6 3 2

**Question No. 6** Why Scanner class is used? Use Scanner class to read student names in an array of size 10 and then display the names of those students which contains word “Rehman” in their names.

**Question No. 7 Define the following Java concepts**

1. private, public and protected
2. constructor
3. JRE, JDK, JVM
4. Super keyword