| **Solution Set#A** | |
| --- | --- |
| **// Solution:**  **public class CourseManager {**  **public String courseCode;**  **public String courseTitle ;**  **public String[] studentNames = new String[4];**  **public int[] studentIDs = new int[4];**  **public int[] studentFees = new int[4];**  **public int studentCount = 0;**  **public int totalFees = 0;**  **public void setCourseInfo(String code, String title) {**  **this.courseCode = code;**  **this.courseTitle = title;**  **}**  **public void registerStudent(String name, int id, int fee) {**  **if (studentCount < 4) {**  **studentNames[studentCount] = name;**  **studentIDs[studentCount] = id;**  **studentFees[studentCount] = fee;**  **totalFees += fee;**  **studentCount++;**  **System.out.println("Student " + name + " (ID: " + id + ") registered successfully.");**  **} else {**  **System.out.println("Registration full for this course.");**  **}**  **}**  **public void registerStudent(String name1, int id1, int fee1, String name2, int id2, int fee2) {**  **if (studentCount < 4) {**  **registerStudent(name1, id1, fee1);**  **}**  **if (studentCount < 4) {**  **registerStudent(name2, id2, fee2);**  **}**  **}**  **public void showCourseDetails() {**  **System.out.println("Course Code: " + courseCode);**  **System.out.println("Course Title: " + courseTitle);**  **System.out.println("Total Registered Students: " + studentCount);**  **System.out.println("Registered Students:");**  **for (int i = 0; i < studentCount; i++) {**  **System.out.println("Name: " + studentNames[i] + ", ID: " + studentIDs[i] + ", Fee: " + studentFees[i] + " Taka");**  **}**  **System.out.println("Total Collected Fees: " + totalFees + " Taka");**  **}**  **}** | |
| Class name and method declarations | **1** |
| Proper Instance Variables | **1.5** |
| setCourseInfo() method execution | **1** |
| registerStudent() with two parameters :  → [1] check proper condition  → [1] insert value in the array  → [1] print properly | **3** |
| registerStudent() with four parameters:  → [1.5] call registerStudent() method two times | **1.5** |
| showCourseDetails():  → [0.5] Check the condition  → [1.5] print all the necessary info properly | **2** |
| **TOTAL** | **10** |

| **Solution Set#B** | |
| --- | --- |
| **// Solution:**  **public class LibraryManager {**  **private String branchName;**  **private String location;**  **private String[] readerNames = new String[4];**  **private int[] bookCounts = new int[4];**  **private String[] bookTitles = new String[4]; // New array for book titles**  **private int readerCount = 0;**  **private int totalBooks = 0;**  **public void setupBranch(String name, String location) {**  **this.branchName = name;**  **this.location = location;**  **}**  **public void borrowBook(String reader, String title, int books) {**  **if (readerCount < 4) {**  **readerNames[readerCount] = reader;**  **bookTitles[readerCount] = title;**  **bookCounts[readerCount] = books;**  **totalBooks += books;**  **readerCount++;**  **System.out.println("Hello " + reader + ", you've borrowed " + books + " book titled '" + title + "'.");**  **} else {**  **System.out.println("Sorry, daily reader limit reached!");**  **}**  **}**  **public void borrowBook(String reader1, String title1, int books1, String reader2, String title2, int books2) {**  **if (readerCount < 4) {**  **borrowBook(reader1, title1, books1);**  **}**  **if (readerCount < 4) {**  **borrowBook(reader2, title2, books2);**  **}**  **}**  **public void showSummary() {**  **System.out.println("Branch Name: " + branchName);**  **System.out.println("Location: " + location);**  **System.out.println("Total Readers Today: " + readerCount);**  **System.out.println("Reader List:");**  **for (int i = 0; i < readerCount; i++) {**  **System.out.println("Name: " + readerNames[i] + ", Books: " + bookCounts[i] + ", Book Name: " + bookTitles[i] );**  **}**  **System.out.println("Total Books Borrowed: " + totalBooks);**  **}**  **}** | |
| Class name and method declarations | **1** |
| Proper Instance Variables | **1.5** |
| setupBranch() method execution | **1** |
| borrowBook() with two parameters :  → [1] check proper condition  → [1] insert value in the array  → [1] print properly | **3** |
| borrowBook() with four parameters:  → [1.5] call registerStudent() method two times | **1.5** |
| showSummary():  → [0.5] Check the condition  → [1.5] print all the necessary info properly | **2** |
| **TOTAL** | **10** |