CSE110 Fall 2025 Lab Exam - 01 Tentative Solutions and Rubrics

[SET-A]

SOLUTION

```
import java.util.Scanner;
public class HotelPricing {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter month: ");
        int month = sc.nextInt();

        System.out.print("Enter Total Nights: ");
        int nights = sc.nextInt();

        // ---- Base nightly prices ----
        double studioNight = 0.0;
        double apartmentNight = 0.0;

        if (month == 5 || month == 10) {          // May or October
            studioNight    = 50.0;
            apartmentNight = 65.0;
        } else if (month == 6 || month == 9) {    // June or September
            studioNight    = 75.0;
            apartmentNight = 69.0;
        } else if (month == 7 || month == 8) {    // July or August
            studioNight    = 76.0;
            apartmentNight = 77.0;
        }

        // ---- Full price ----
        double totalStudio    = studioNight    * nights;
        double totalApartment = apartmentNight * nights;

        // ---- Discounts (only when nights > 14) ----
        if (nights > 14) {
            if (month == 5 || month == 10) {
                totalStudio    *= 0.70;   // 30 % off
                totalApartment *= 0.90;   // 10 % off
            } else if (month == 6 || month == 9) {
                totalStudio    *= 0.80;   // 20 % off
                totalApartment *= 0.90;   // 10 % off
            } else if (month == 7 || month == 8) {
                totalApartment *= 0.90;   // 10 % off only
            }
        }

        System.out.println("Apartment: " + totalApartment + " USD.");
        System.out.println("Studio: " + totalStudio + " USD.");

        sc.close();
    }
}
```

CSE110 Fall 2025 Lab Exam - 01 Tentative Solutions and Rubrics

[SET-B]

SOLUTION

```
import java.util.Scanner;
public class BeachResort {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter month: ");
        int month = sc.nextInt();

        System.out.print("Enter nights: ");
        int nights = sc.nextInt();

        double bungalowBase = 0.0;
        double villaBase = 0.0;

        // Set base prices using if-else
        if (month == 5 || month == 10) {
            bungalowBase = 55.0;
            villaBase = 80.0;
        } else if (month == 6 || month == 9) {
            bungalowBase = 85.0;
            villaBase = 120.0;
        } else if (month == 7 || month == 8) {
            bungalowBase = 95.0;
            villaBase = 135.0;
        }

        // Calculate base total
        double totalBungalow = bungalowBase * nights;
        double totalVilla = villaBase * nights;

        // Apply extra charge only if nights > 12
        if (nights > 12) {
            double bungalowExtra = 0.0;
            double villaExtra = 0.0;

            if (month == 5 || month == 10) {
                bungalowExtra = 5.0;
                villaExtra = 8.0;
            } else if (month == 6 || month == 9) {
                bungalowExtra = 3.0;
                villaExtra = 8.0;
            } else if (month == 7 || month == 8) {
                villaExtra = 8.0;
            }

            totalBungalow += bungalowExtra * nights;
```

```
            totalVilla += villaExtra * nights;
        }

        // Output: Villa first, then Bungalow
        System.out.println("Villa: " + totalVilla + " USD.");
        System.out.println("Bungalow: " + totalBungalow + " USD.");

        sc.close();
    }
}
```

CSE110 Fall 2025 Lab Exam - 02 Tentative Solutions and Rubrics

In case of any circumstance not present in the rubrics, feel free to discuss in assigned slack channel. This rubric is provided to maintain a similar marking scheme throughout all sections.

[SET-A]

SOLUTION

```
import java.util.Scanner;
public class Quiz2SetA {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Ancient Number: ");
        int num = sc.nextInt();
        System.out.print("Special digit: ");
        int N = sc.nextInt();
        int temp = num;
        int foundPos = -1;
        int temp_pos = 1;
        // Search the Number
        while (temp > 0) {
            int digit = temp % 10;
            if (digit == N) {
                foundPos= temp_pos;
                break;
            }
            temp /= 10;
            temp_pos++;
        }
        if (foundPos == -1) {
            // Number not found
            System.out.println("No Magic is possible");
        } else {
               // Number found
            System.out.println("Special digit " + N + " is found in the " + foundPos + "th
position.");
            int sum = 0;
            temp = num;
            int i = 1;
            //loop for summation
            while (temp > 0) {
                int digit = temp % 10;
                if (foundPos % 2 == 0 && i % 2 == 0) {
                    sum += digit;
                } else if (foundPos % 2 != 0 && i % 2 != 0) {
                    sum -= digit;
                }
                temp /= 10;
                i++;
            }
            System.out.println("Magic number is : " + sum);
        }
    }}
```

CSE110 Spring 2024 Lab Exam - 0X Tentative Solutions and Rubrics

[SET-B]

SOLUTION

```
import java.util.Scanner;
public class Quiz2SetB {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Ancient Number: ");
        int num = sc.nextInt();
        System.out.print("Special digit: ");
        int N = sc.nextInt();

        int temp = num;
        int foundPos = -1;
        int temp_pos = 1;
        // Search the Number
        while (temp > 0) {
            int digit = temp % 10;
            if (digit == N) {
                foundPos= temp_pos;
                break;
            }
            temp /= 10;
            temp_pos++;
        }

        if (foundPos == -1) {
            // Number not found
            System.out.println("No Magic is possible");
        } else {
          // Number Found
            System.out.println("Special digit " + N + " is found in the " + foundPos
+ "th position.");
            int product = 1;
            temp = num;
            int i = 1;
            //loop for multiplication
            while (temp > 0) {
                int digit = temp % 10;
                if (foundPos % 2 == 0 && i % 2 == 0) {
                    product *= digit;
                } else if (foundPos % 2 != 0 && i % 2 != 0) {
                    product *= digit;
                }
                temp /= 10;
                i++;
            }
            System.out.println("Magic number is : " + product);
        }
    }}
```