**Name:**

**Advanced Programming in Java**

**Lab Exercise 12.3.2024**

**Write the following programs. Print out the documented source code and attach it to this sheet and turn in. Documentation is to include name, problem number, date, and a brief description of what the program does.**

Example:

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Lab Exercise 12.16.2019 Problem 3

This program calculates the energy required transport a 165 pound human from the Earth’s surface to a starship orbiting the Earth at a distance of 40,000 kilometers.

1. Write a Java program to accept a filename from the user and print the extension of that.   
Sample filename : abc.java   
Output : java

2. Write a Java program which accepts the radius of a circle from the user and computes the area and provides the following output:  
Sample Output :   
r = 1.1  
Area = 3.8013271108436504

3. Write a Java program that accepts an integer (n) and computes the value of n+n2+n3.  
Sample value of n is 5 Expected Result : 155

4. Write a Java program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself.  
Sample String : 'restart'  
Expected Result : 'resta$t'

5. Write a Java program to remove the characters which have odd index values of a given string.

Sample String: 'restart'

Expected result: 'rsat'

6. Write a Java function to check whether a string is a pangram or not.  
Note : Pangrams are words or sentences containing every letter of the alphabet at least once.  
For example : "The quick brown fox jumps over the lazy dog" is a pangram.