Task 5 – Advance Java

1. **Convert a list of strings into uppercase**

   Program:

```
package com.advance;

import java.util.List;
import java.util.stream.Collectors;
import java.util.stream.Stream;

public class UpperCase {
public static void main(String[] args) {
Stream<String> names = Stream.of("aBc", "d", "ef");
List<String> upperCaseNames = names.map(String::toUpperCase)
.collect(Collectors.toList());
upperCaseNames.forEach(System.out::println);
}
}
```

   Output:

```
ABC
D
EF
```

2. **Print non-empty strings**

   Program:

```
package com.advance;

import java.util.Arrays;
import java.util.List;
import java.util.stream.Collectors;

public class NonEmptyStrings {
public static void main(String[] args) {
List<String> strings = Arrays.asList("abc", "", "bc", "efg", "abcd", "", "jkl");
List<String> nonEmptyStrings = strings.stream()
.filter(s -> !s.isEmpty())
.collect(Collectors.toList());
System.out.println("Non-empty strings: " + nonEmptyStrings);
}
}
```

   Output:

```
Non-empty strings: [abc, bc, efg, abcd, jkl]
```

3. **Filter students names that starts with 'A'**

Program:

```
package com.advance;

import java.util.Arrays;
import java.util.List;
import java.util.stream.Collectors;

public class FilterStudentNames {
public static void main(String[] args) {
List<String> studentNames = Arrays.asList("Alice", "Bob", "Angela", "David", "Aaron", "Bella");
List<String> filteredNames = studentNames.stream()
.filter(name -> name.startsWith("A"))
.collect(Collectors.toList());
System.out.println("Students whose names start with 'A': " + filteredNames);
}
}
```

Output:

```
Students whose names start with 'A': [Alice, Angela, Aaron]
```

4. **Calculate user's age based on their birthdate using java.time.LocalDate**

Program:

```
package com.advance;

import java.time.LocalDate;
import java.time.Period;
import java.time.format.DateTimeFormatter;
import java.util.Scanner;

public class AgeCalculator {
public static void main(String[] args) {
Scanner scanner = new Scanner(System.in);
System.out.print("Enter your birthdate (yyyy-mm-dd): ");
String input = scanner.nextLine();
LocalDate birthdate = LocalDate.parse(input, DateTimeFormatter.ISO_LOCAL_DATE);
LocalDate currentDate = LocalDate.now();
Period age = Period.between(birthdate, currentDate);
System.out.println("Your age is "
+ age.getYears() + " years, "
+ age.getMonths() + " months and "
+ age.getDays() + " days.");
}
}
```

Output:

```
Enter your birthdate (yyyy-mm-dd): 1990-05-15
Your age is 34 years, 6 months and 0 days.
```