

1. Write a Java class, **PasswordChecker**, in which the method 'main' asks user to enter a password that meets the 2 criteria below:
 - Must have at least 8 characters
 - Must have at least one uppercase letter, one lowercase letter, and one digit

The program will print a message "Please enter a password again!" if the password does not meet the criteria, till the criteria are met and the program will then print a message 'The password is okay!' to terminate the program. Hint: You may use Scanner class and a while loop. **[10 points]**

2. Suppose that the tuition for a university is \$10,000 this year and increases 5% every year. In one year, the tuition will be \$10,500. Write a Java class, **ComputeTuition**, in which the method 'main' that computes and prints out the tuition in tenth year and the total cost of four years' worth of tuition after the tenth year (i.e., the total tuition of 11th ~ 14th year). **[10 points]**
3. Write two Java methods with different approaches that determine whether there are any duplicate values within an integer array, and print out the message "Yes Duplicate" or "No Duplicate".

(1) One is to define another array in the method **[5 points]**:

```
public static void CheckDuplicate_1(int arr[ ]) { // your solutions here }
```

(2) The other is NOT to define another array in the method **[5 points]**:

```
public static void CheckDuplicate_2(int arr[ ]) { // your solutions here }
```