**CME1212 Algorithms and Programming II**

**Homework 2**

Upload your program from *Google Classroom* until **20 March 2019, 23:55.**

Write a Java program for a simple version of ***Alphabet Lotto*** game.

Two people play this game with:

- alphabet-cards

- bags including letters

Each card consists of 8 English letters. The first 4 ones are ranged from A to N, while the others are ranged from O to Z.

At the beginning of the game, each card (stack) should be randomly filled with distinct values. So, the letters in one stack should be different from each other.

Example:



There is a *bag1* (stack) that initially includes all English letters. The program selects a letter from this bag randomly and removes it from the bag1. Each player deletes that letter from his/her stack. Selected letters are added to another bag (stack), named *bag2*, so the next letter is selected from the remaining letters.

Example:



When a person deletes the first or last 4 letters, he/she gets the award $10. (“birinci çinko”)

When a person deletes all letters from the stack, he/she wins the game lotto and gets $30.

If both players delete their last letter at the same time, they game is over without any winner (tie) and they share the money.

In your program, you can use stacks as you want, but you must use only stacks, don’t use other data structures.

Don’t use normal array.

Don’t use a string variable.

The program must display all steps until the game is over.

At the end of the game, the winner should be displayed, if exists.

The money that each player gets should also be printed.

Don’t take any input from the user !!!

**Sample output:**

Player1: G A K E U Y S Z Bag1 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Player2: D B N A R T W P Bag2

selected number: Y

Player1: G A K E U S Z Bag1 A B C D E F G H I J K L M N O P Q R S T U V W X Z

Player2: D B N A R T W P Bag2 Y

selected number: K

Player1: G A E U S Z Bag1 A B C D E F G H I J L M N O P Q R S T U V W X Z

Player2: D B N A R T W P Bag2 Y K

selected number: A

Player1: G E U S Z Bag1 B C D E F G H I J L M N O P Q R S T U V W X Z

Player2: D B N R T W P Bag2 Y K A

selected number: J

Player1: G E U S Z Bag1 B C D E F G H I L M N O P Q R S T U V W X Z

Player2: D B N R T W P Bag2 Y K A J

selected number: E

Player1: G U S Z Bag1 B C D F G H I L M N O P Q R S T U V W X Z

Player2: D B N R T W P Bag2 Y K A J E

selected number: W

Player1: G U S Z Bag1 B C D F G H I L M N O P Q R S T U V X Z

Player2: D B N R T P Bag2 Y K A J E W

selected number: G

Player1: U S Z Bag1 B C D F H I L M N O P Q R S T U V X Z

Player2: D B N R T P Bag2 Y K A J E W G

Player1 gets $10 (Birinci Çinko)

selected number: S

Player1: U Z Bag1 B C D F H I L M N O P Q R T U V X Z

Player2: D B N R T P Bag2 Y K A J E W G S

selected number: U

Player1: Z Bag1 B C D F H I L M N O P Q R T V X Z

Player2: D B N R T P Bag2 Y K A J E W G S U

selected number: Z

Player1: Bag1 B C D F H I L M N O P Q R T V X

Player2: D B N R T P Bag2 Y K A J E W G S U Z

Player1 is the winner

Player1 gets $40

Player2 gets $0

**Notes**

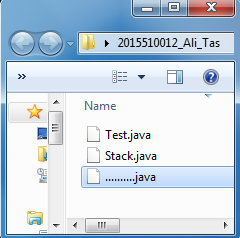
**1-** Upload format

**Step1:** Create a new folder, named by your student number and name (without any space)

For example: 2015510012\_Ali\_Tas



**Step2:** Copy all java files into this folder



**Step3:** Compress the folder **2015510012\_Ali\_Tas.zip**

**Step4:** Upload the file **2015510012\_Ali\_Tas.zip** from *google.classroom.com*

**2-** Don’t use ENIGMA or any other extra library.

**3.**If you are late, your grade will be decreased 10 points for each day. After five days, your assignment will not be accepted.

**4-** Assignment must be your individual work.

**Cheating** is strictly prohibited.

All source codes will be automatically compared with each other by using a program.

If any cheating occurs, your assignment will be graded with **zero (0)**.