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**Class: BSCS-6C (2nd semester)**

**Lab-10**

**Object Oriented Programming(OOP)**

**Hangman Game Source Code:**

**Main.java**

**package** Lab10;

**import** java.util.Scanner;

**public** **class** Main {

**public** **static** **void** main(String[] args) {

Game ObjectGame = **new** Game();

Scanner keyboard = **new** Scanner(System.***in***);

String userInput;

**char** userGuess;

ObjectGame.beginGame();

**do** {

System.***out***.print("\n-\*=-\*=-\*=-\*=-\*=-\*=-=\*-=-\*="

+ "-=\*-=-=\*-=-\*=-\*=-\*=-=\n\nSecret Word: ");

ObjectGame.showRow();

System.***out***.print("\n\nMissed words: ");

ObjectGame.showMissedWords();

System.***out***.print("\nGuess: ");

userInput = keyboard.next();

**if** (userInput.equalsIgnoreCase("exit"))

**break**;

**else** **if** (userInput.equalsIgnoreCase("new"))

ObjectGame.beginGame();

**else** {

userGuess = userInput.charAt(0);

ObjectGame.checkRow(userGuess);

**if** (ObjectGame.Loosing()) {

System.***out***

.println("\nGame Over!\nYou have missed 8 times!\nThe word was "

+ ObjectGame.getPrivateWord()

+ " ! \nThe ObjectGame will now reset!\n");

ObjectGame.beginGame();

}

**else** **if** (ObjectGame.Winning()) {

System.***out***

.println("\nCongratulations!\nYou have userGuessed"

+ " the word!\nThe ObjectGame will now reset!\n");

ObjectGame.beginGame();

}

}

} **while** (**true**);

System.***out***.println("\nThank you for playing !");

keyboard.close();

}

}//end class Main.

**Game.java**

**package** Lab10;

**import** java.util.Random;

**public** **class** Game {

Random random = **new** Random();

StringBuffer misses = **new** StringBuffer("");

**private** **final** String[] wordList = { "lion", "wolverine", "sherlock",

"banana", "apple", "strawberry", "mangoe", "grapes",

"eagle", "england", "pakistan", "information", "madrid",

"kangaroos" };

**private** String privateWord;

**char**[] hangman;

**public** **void** beginGame() {

settingWord();

setRow();

misses.delete(0, misses.length());

System.***out***.println("\nWelcome to the Hangman Game! Type \"exit\" to stop game "

+ "or \"new\" to reset !\nOnly the first letter in youre"

+ " input will be considered a guess.\nYou have 8 chances to guesses !\n");

}

**private** **void** settingWord() {

privateWord = wordList[random.nextInt(wordList.length)];

}

**private** **void** setRow() {

hangman = **new** **char**[privateWord.length()];

**for** (**int** i = 0; i < privateWord.length(); i++) {

hangman[i] = '\_';

}

}

**public** **void** showRow() {

**for** (**int** i = 0; i < hangman.length; i++)

System.***out***.print(hangman[i] + " ");

}

**public** **void** showMissedWords() {

System.***out***.println(misses);

}

**private** **boolean** checkCharInWord(**char** guess) {

**for** (**int** i = 0; i < hangman.length; i++) {

**if** (privateWord.charAt(i) == guess)

**return** **true**;

}

**return** **false**;

}

**private** **void** changeRow(**char** guess) {

**for** (**int** i = 0; i < hangman.length; i++)

**if** (privateWord.charAt(i) == guess)

hangman[i] = privateWord.charAt(i);

}

**private** **void** addToMisses(**char** guess) {

misses.append(guess + " ");

}

**public** **void** checkRow(**char** guess) {

**if** (checkCharInWord(guess)) {

changeRow(guess);

} **else**

addToMisses(guess);

}

**public** **boolean** Loosing() {

**if** (misses.length() / 2 > 7)

**return** **true**;

**return** **false**;

}

**public** **boolean** Winning() {

**for** (**int** i = 0; i < hangman.length; i++)

**if** (hangman[i] == '\_')

**return** **false**;

**return** **true**;

}

**public** String getPrivateWord() {

**return** privateWord;

}

}//end class

**OUTPUT**

