import java.util.Scanner;

public class HangmanGame {

private static final String[] WORDS = {"JAVA", "PYTHON", "COMPUTER", "PROGRAMMING", "DEVELOPMENT"};

private static final int MAX\_TRIES = 6;

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

String secretWord = selectRandomWord();

char[] guessedLetters = new char[secretWord.length()];

int incorrectAttempts = 0;

initializeGuessedLetters(guessedLetters);

System.out.println("Welcome to Hangman!");

displayHangman(incorrectAttempts);

displayWord(guessedLetters);

while (incorrectAttempts < MAX\_TRIES && !isWordGuessed(guessedLetters)) {

char guess = getValidGuess(scanner);

if (isGuessCorrect(secretWord, guessedLetters, guess)) {

System.out.println("Good guess!");

} else {

System.out.println("Incorrect guess!");

incorrectAttempts++;

}

displayHangman(incorrectAttempts);

displayWord(guessedLetters);

}

if (isWordGuessed(guessedLetters)) {

System.out.println("Congratulations! You guessed the word: " + secretWord);

} else {

System.out.println("Sorry, you ran out of attempts. The word was: " + secretWord);

}

scanner.close();

}

private static String selectRandomWord() {

return WORDS[(int) (Math.random() \* WORDS.length)];

}

private static void initializeGuessedLetters(char[] guessedLetters) {

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

guessedLetters[i] = '\_';

}

}

private static void displayHangman(int incorrectAttempts) {

// Display the hangman ASCII art based on the incorrect attempts

// You can customize this part to make it more elaborate

System.out.println("Incorrect Attempts: " + incorrectAttempts);

switch (incorrectAttempts) {

case 1:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

break;

case 2:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

System.out.println(" | |");

break;

case 3:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

System.out.println(" | /|");

break;

case 4:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

System.out.println(" | /|\\");

break;

case 5:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

System.out.println(" | /|\\");

System.out.println(" | /");

break;

case 6:

System.out.println(" \_\_\_\_\_\_\_\_\_\_\_\_");

System.out.println(" | |");

System.out.println(" | O");

System.out.println(" | /|\\");

System.out.println(" | / \\");

break;

}

}

private static void displayWord(char[] guessedLetters) {

for (char letter : guessedLetters) {

System.out.print(letter + " ");

}

System.out.println();

}

private static boolean isWordGuessed(char[] guessedLetters) {

for (char letter : guessedLetters) {

if (letter == '\_') {

return false;

}

}

return true;

}

private static boolean isGuessCorrect(String secretWord, char[] guessedLetters, char guess) {

boolean correctGuess = false;

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

if (secretWord.charAt(i) == guess) {

guessedLetters[i] = guess;

correctGuess = true;

}

}

return correctGuess;

}

private static char getValidGuess(Scanner scanner) {

char guess;

while (true) {

System.out.print("Enter your guess: ");

String input = scanner.next().toUpperCase();

if (input.length() == 1 && Character.isLetter(input.charAt(0))) {

guess = input.charAt(0);

break;

} else {

System.out.println("Invalid input. Please enter a single letter.");

}

}

return guess;

}

}