# AssigningArrayReferencespg 146→AssignARef.java code→

package AssigningArrayReferences;

//Assigning array reference variables.

class AssignARef {

public static void main(String args[]) {

int i;

int nums1[] = new int [10];

int nums2[] = new int [10];

for (i=0; i < 10; i++)

nums1[i] = i;

for (i=0; i < 10; i++)

nums2[i] = -i;

System.out.print("Here is nums1: ");

for (i=0; i < 10; i++)

System.out.print(nums1[i] + " ");

System.out.println();

System.out.print("Here is nums2: ");

for (i=0; i < 10; i++)

System.out.print(nums2[i] + " ");

System.out.println();

nums2 = nums1; // now nums2 refers to nums1

System.out.print("Here is nums2 after assignment: ");

for(i=0; i < 10; i++)

System.out.print(nums2[i] + " ");

System.out.println();

//now operate on nums1 array through nums2

nums2[3] = 99;

System.out.print("Here is nums1 after change through nums2: ");

for (i=0; i < 10; i++)

System.out.print(nums1[i] + " ");

System.out.println();

}

}

# Example 1→Example.java code→

/\*

\* This is a simple Java program.

\*

\* Call this file Example.java.

\*/

public class Example {

public static void main(String args[]) {

System.out.println("Java drives the Web.");

}

}

# For Loop→ForLoop.java code→

/\*

Demonstrate the for loop.

\*

Call this file ForLoop.java.

\*/

public class ForLoop {

public static void main(String args[]) {

int count;

for(count = 0; count < 5; count = count+1)

System.out.println("This is count: " + count);

System.out.println("Done!");

}

}

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# HelloWorld→HelloWorld.java code→

package com.charleskelly.hello;

public class HelloWorld

{

/\*\*

\* @param args

\*

\*/

public static void main(String[] args)

{

System.out.println("Hello World!");

}//public static void main(String[] args)

}//public class HelloWorld

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# MainProject→Main.java code→

public class Main {

public static void main(String[] args) {

sayHi();

}

//Display a message

static void sayHi() {

System.out.println("Hi");

}

}

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# NumberGuess→main.java code →

**package** numberguess;

**public** **class** NumberGuess {

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

// Define program variables

**int** randNum, attemptNum, guessNum;

// Generate a random number between 1 and 10

randNum = **new** java.util.Random().nextInt(10)+1;

//Display a message

System.***out***.println

("I am thinking of a random number between 1 and 10.");

//Ask for a guess and check the input

**for** (attemptNum = 0; attemptNum < 3; attemptNum = attemptNum+1) {

System.***out***.print("Guess what it is?");

java.util.Scanner scan = **new** java.util.Scanner(System.***in***);

guessNum = scan.nextInt();

System.***out***.println("You guessed " + guessNum);

**if** (guessNum == randNum) {

System.***out***.println("You guessed it!");

**break**;

}

System.***out***.println("Sorry, try again!");

}

}

}

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# SumTo100→SumTo100.java code →

package sumto100;

/\*

This program adds the numbers through 100

\*/

class SumTo100 {

public static void main(String[] args) {

int num=0;//declare some variables

int total=0;

int count;

for (count=1; count<=100; count++) {

num++;

total = total + num;

}

System.out.println ("The sum of the numbers 1 through 100 is " +

total);

}

}

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# Example3→Example3.java code →

import javax.swing.JOptionPane;

import java.util.Random;

public class RandomNumberGuessingGame{

public static void main( String [ ] args ) {

Random random = new Random();

**int** randomNumber = random.nextInt( 101 );

boolean userCorrect = false;

String userInputString;

**int** userGuessedNumber;

while( !userCorrect ) {

userInputString = JOptionPane.showInputDialog( "Guess the number: " );

userGuessedNumber = Integer.parseInt( userInputString );

if( userGuessedNumber > randomNumber ) {

JOptionPane.showMessageDialog( null, "Too high, try again" );

} else if( userGuessedNumber < randomNumber ) {

JOptionPane.showMessageDialog( null, "Too low, try again");

} else {

JOptionPane.showMessageDialog( null, "Yes, you guessed the number.");

userCorrect = true;

}

}

}

}

# TicTacToeGame→TicTacToeGame.java code →

**package** tictactoegame;

**import** java.util.Scanner;

**public****class** TicTacToeGame {

**static****int**[][] *gameboard* = **new****int**[3][3];

**static****final****int*****EMPTY*** = 0;

**static****final****int*****NOUGHT*** = -1;

**static****final****int*****CROSS*** = 1;

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

*createBoard*(3,3);

**int** turn = 0;

**int** playerVal;

**int** outcome;

java.util.Scanner scan = **new** java.util.Scanner(System.***in***);

**do** {

*displayBoard*( );

playerVal = (turn % 2 == 0)? ***NOUGHT*** : ***CROSS***;

**if** (playerVal == ***NOUGHT***)

System.***out***.println ("\n—O's turn—");

**else** System.***out***.println("\n—X's turn—" );

System.***out***.print("Enter row and column:" );

**try** {

*set*(playerVal, scan.nextInt(), scan.nextInt());

} **catch** (Exception ex)

{System.***err***.println(ex); turn--;}

turn ++;

outcome = *winOrTie*( );

} **while** ( outcome == -2 );

*displayBoard*();

**switch** (outcome) {

**case*****NOUGHT***:

System.***out***.println("O wins!");

**break**;

**case*****CROSS***:

System.***out***.println("X wins!");

**break**;

**case** 0:

System.***out***.println("Tie.");

**break**;

}

}

/\* Set a square on the board must be empty \*/

**static****void** set(**int** val, **int** row, **int** col)

**throws** IllegalArgumentException {

**if** (*gameboard*[row][col] == ***EMPTY***)

*gameboard*[row][col] = val;

**else****throw****new** IllegalArgumentException

("Player already there!");

}

/\* display the board \*/

**static****void** displayBoard() {

**for**(**int** r=0; r < *gameboard*.length; r++) {

System.***out***.print("|");

**for** (**int** c = 0; c < *gameboard*[r].length; c++)

{

**switch**(*gameboard*[r][c]) {

**case*****NOUGHT***:

System.***out***.print("O");

**break**;

**case*****CROSS***:

System.***out***.print("X");

**break**;

**default**: //Empty

System.***out***.print(" ");

}

System.***out***.print("|");

}

System.***out***.println("\n-------");

}

}

**public****static****void** createBoard(**int** rows, **int** cols) {

//**TODO** Initialize the gameboard

}

**static****int** winOrTie() {

//**TODO** Determine whether X or O won or there is a tie

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[0][2] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[1][0] + *gameboard*[1][1] + *gameboard*[1][2] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[2][0] + *gameboard*[2][1] + *gameboard*[2][2] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][0] + *gameboard*[1][0] + *gameboard*[2][0] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][1] + *gameboard*[1][1] + *gameboard*[2][1] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][2] + *gameboard*[1][2] + *gameboard*[2][2] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][0] + *gameboard*[1][1] + *gameboard*[2][2] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][2] + *gameboard*[1][1] + *gameboard*[2][0] == 3\****NOUGHT***)

{**return*****NOUGHT***;}

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[0][2] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[1][0] + *gameboard*[1][1] + *gameboard*[1][2] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[2][0] + *gameboard*[2][1] + *gameboard*[2][2] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[0][0] + *gameboard*[1][0] + *gameboard*[2][0] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[0][1] + *gameboard*[1][1] + *gameboard*[2][1] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[0][2] + *gameboard*[1][2] + *gameboard*[2][2] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[0][0] + *gameboard*[1][1] + *gameboard*[2][2] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[0][2] + *gameboard*[1][1] + *gameboard*[2][0] == 3\****CROSS***)

{**return*****CROSS***;}

**if** (*gameboard*[2][2] + *gameboard*[1][2] + *gameboard*[1][1] + *gameboard*[0][1]

+ *gameboard*[2][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[1][0] + *gameboard*[1][1] + *gameboard*[2][1]

+ *gameboard*[0][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][2] + *gameboard*[1][2] + *gameboard*[1][1] + *gameboard*[2][1]

+ *gameboard*[0][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[2][1] + *gameboard*[1][1] + *gameboard*[1][2]

+ *gameboard*[0][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[1][1] + *gameboard*[1][2]

+ *gameboard*[2][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[1][0] + *gameboard*[1][1] + *gameboard*[0][1]

+ *gameboard*[2][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][2] + *gameboard*[0][1] + *gameboard*[1][1] + *gameboard*[1][0]

+ *gameboard*[2][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][2] + *gameboard*[2][1] + *gameboard*[1][1] + *gameboard*[1][0]

+ *gameboard*[0][2] == 5\****NOUGHT***)

{**return** 0;}

**if**(*gameboard*[0][2] + *gameboard*[0][1] + *gameboard*[1][2] + *gameboard*[2][1]

+ *gameboard*[1][0] == 5\****NOUGHT***)

{**return** 0;}

**if**(*gameboard*[0][0] + *gameboard*[1][0] + *gameboard*[0][1] + *gameboard*[2][1]

+ *gameboard*[1][2] == 5\****NOUGHT***)

{**return** 0;}

**if**(*gameboard*[2][0] + *gameboard*[1][0] + *gameboard*[2][1] + *gameboard*[0][1]

+ *gameboard*[1][2] == 5\****NOUGHT***)

{**return** 0;}

**if**(*gameboard*[2][2] + *gameboard*[1][2] + *gameboard*[2][1] + *gameboard*[0][1]

+ *gameboard*[1][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][2] + *gameboard*[0][1] + *gameboard*[1][2] + *gameboard*[1][0]

+ *gameboard*[2][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][2] + *gameboard*[0][1] + *gameboard*[2][1] + *gameboard*[2][0]

+ *gameboard*[2][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[1][0] + *gameboard*[2][1]

+ *gameboard*[2][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[1][0] + *gameboard*[1][2]

+ *gameboard*[2][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][2] + *gameboard*[2][1] + *gameboard*[1][2] + *gameboard*[1][0]

+ *gameboard*[0][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][2] + *gameboard*[2][1] + *gameboard*[1][2] + *gameboard*[0][1]

+ *gameboard*[0][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[2][1] + *gameboard*[1][0] + *gameboard*[0][1]

+ *gameboard*[0][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[2][1] + *gameboard*[1][0] + *gameboard*[1][2]

+ *gameboard*[2][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[1][0] + *gameboard*[2][1] + *gameboard*[0][2]

+ *gameboard*[0][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[1][0] + *gameboard*[2][1] + *gameboard*[1][2]

+ *gameboard*[0][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[0][2] + *gameboard*[1][2] + *gameboard*[2][0]

+ *gameboard*[2][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][2] + *gameboard*[0][1] + *gameboard*[0][2] + *gameboard*[1][0]

+ *gameboard*[2][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][2] + *gameboard*[1][0] + *gameboard*[0][0] + *gameboard*[2][2]

+ *gameboard*[2][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[2][2] + *gameboard*[1][2] + *gameboard*[0][0]

+ *gameboard*[0][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[0][1] + *gameboard*[2][0] + *gameboard*[2][1]

+ *gameboard*[1][2] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[2][0] + *gameboard*[1][0] + *gameboard*[2][2] + *gameboard*[1][2]

+ *gameboard*[0][1] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][1] + *gameboard*[0][2] + *gameboard*[2][1] + *gameboard*[2][2]

+ *gameboard*[1][0] == 5\****NOUGHT***)

{**return** 0;}

**if** (*gameboard*[0][0] + *gameboard*[1][0] + *gameboard*[0][2] + *gameboard*[1][2]

+ *gameboard*[2][1] == 5\****NOUGHT***)

{**return** 0;}

**return** -2;

}

} // END of Program