COMSATS UNIVERSITY, ISLAMABAD



**Programming Fundamentals**

--CSC103--

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1.Input a character from user. Check if it is vowel or consonant. First do it with if-else statement and then with switch statement.

# Using If-else:

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** char character = scan.next().charAt(**0**)**;** if (character == 'a' || character == 'e'|| character == 'i' || character == 'o' || character == 'u' ||  
 character == 'A' || character == 'E' || character == 'I'|| character == 'O' || character == 'U'){  
 System.*out*.println("You entered a Vovel ")**;** }  
 else  
 System.*out*.println("You entered a consonent")**;** }  
  
}

# Switch Statement:

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** char character = scan.next().charAt(**0**)**;** switch(character){  
 case 'a' : case 'e' : case 'i' : case 'o' : case 'u' : case 'A' : case 'E' : case 'I' : case 'O' :case 'U' :  
 System.*out*.println("You entered vovel")**;** break**;** default:  
 System.*out*.println("You entered Consonent")**;** }  
 }  
  
}

2.Take three floating-point numbers. Find the largest of them. Implement using nested-if statement, and then with multi-way if-else statement.

# Nested If:

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter three floating point numbers: ")**;** float num1 = scan.nextFloat()**;** float num2 = scan.nextFloat()**;** float num3 = scan.nextFloat()**;** if (num1 > num2)  
 if (num1 > num3)  
 System.*out*.println("Num 1 is greatest")**;** if (num2 > num1)  
 if (num2 > num3)  
 System.*out*.println("Num 2 is greatest")**;** if (num3 > num2)  
 if (num3 > num1)  
 System.*out*.println("Num 3 is greatest")**;** if (num1 == num2)  
 if (num1 == num3)  
 System.*out*.println("Numbers are equal")**;** }  
}  
   
}

# Multiway if else:

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter three floating point numbers: ")**;** float num1 = scan.nextFloat()**;** float num2 = scan.nextFloat()**;** float num3 = scan.nextFloat()**;** if (num1 > num2 && num1 > num3 ){  
 System.*out*.println("Num 1 is greater")**;** }  
 else if ((num2 > num1) && (num2 > num3) ){  
  
 System.*out*.println("Num 2 is greater")**;** }  
 else if (num3 > num1 && num2 > num3)  
 System.*out*.println("Num 3 is greater")**;** else  
 System.*out*.println("Numbers are equal")**;** }  
}  
   
}

3.Input a year from keyboard. Your program should determine if it is a leap year or not.

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter a Year: ")**;** int year = scan.nextInt()**;** if (year % **4** == **0**)  
 System.*out*.println("Leap year")**;** else  
 System.*out*.println("Not a Leap year")**;** }  
  
}

4.Input a character. Determine if the character is an alphabet or not. If it is an alphabet, check if it is an uppercase alphabet or lowercasealphabet.

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter a character")**;** char character = scan.next().charAt(**0**)**;** int ascii = (int) character**;** if (ascii >= **65** && ascii <= **90** || ascii >= **97** && ascii <= **122** ){  
 System.*out*.println("Its an alphabet")**;** if (ascii >= **65** && ascii <= **90** )  
 System.*out*.println("Its an Upper case alphabet")**;** else  
 System.*out*.println("Its a Lower case alphabet")**;** }  
 else  
 System.*out*.println("Not an alphabet")**;** }  
  
}

5.Calculate a student’s grade and GPA for Programming Fundamentals. Get marks from user.

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter your numbers: ")**;** int number = scan.nextInt()**;** if (number < **50**)  
 System.*out*.println("Your grade is F and Your Gpa is 0.0")**;** else if (number >= **50** && number <=**59** )  
 System.*out*.println("Your grade is D and Your Gpa is 1.0")**;** else if (number >= **60** && number <=**69**)  
 System.*out*.println("Your grade is C and Your Gpa is 2.0")**;** else if (number >= **70** && number <=**79** )  
 System.*out*.println("Your grade is B and Your Gpa is 3.0")**;** else if (number >= **80** && number <= **89**)  
 System.*out*.println("Your grade is A and Your Gpa is 3.5")**;** if (number >= **90** && number <= **100**)  
 System.*out*.println("Your grade is A+ and Your Gpa is 4.0")**;** else  
 System.*out*.println("Invailid Input")**;** }  
  
}

6.Make a scientific calculator. Implement 10 math functions, using Java’s Math class, with switch-case statement.

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
  
 Scanner scan = new Scanner(System.*in*)**;** System.*out*.println("Enter your numbers: ")**;** int number = scan.nextInt()**;** System.*out*.println("Enter 1 to sin()"  
 + "\nEnter 2 to cos()"  
 + "\nEnter 3 to tan()"  
 + "\nEnter 4 to sqr()"  
 + "\nEnter 5 to sqrt()"  
 + "\nEnter 6 to ln()"  
 + "\nEnter 7 to log()"  
 + "\nEnter 8 to cube()"  
 + "\nEnter 9 to abs()"  
 + "\nEnter 10 to find x^-1")**;** int choice = scan.nextInt()**;** switch (choice){  
 case **1**:  
 System.*out*.println("Sin of the number is :" +Math.*sin*(number))**;** break**;** case **2**:  
 System.*out*.println("cos of the number is :" +Math.*cos*(number))**;** break**;** case **3**:  
 System.*out*.println("tan of the number is :" +Math.*tan*(number))**;** break**;** case **4**:  
 System.*out*.println("sqr of the number is :" +Math.*pow*(number**,**number))**;** break**;** case **5**:  
 System.*out*.println("sqrt of the number is :" +Math.*sqrt*(number))**;** break**;** case **6**:  
 System.*out*.println("ln of the number is :" +Math.*log10*(number))**;** break**;** case **7**:  
 System.*out*.println("log of the number is :" +Math.*log*(number))**;** break**;** case **8**:  
 System.*out*.println("cube of the number is :" +Math.*pow*(number**,3**))**;** break**;** case **9**:  
 System.*out*.println("abs of the number is :" +Math.*abs*(number))**;** break**;** case **10**:  
 System.*out*.println("x^-1 of the number is :" +Math.*pow*(number**,**-**1**))**;** break**;** }  
 }  
  
}

7.Find difference between two time periods (a time period is hours:minutes:seconds).

package task1**;**import java.text.ParseException**;**import java.text.SimpleDateFormat**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) throws ParseException {  
  
 Scanner scan = new Scanner(System.*in*)**;** SimpleDateFormat format = new SimpleDateFormat("HH:mm:ss")**;** String time1 = "17:13:00"**;** String time2 = "20:23:10"**;** Date date1 = format.parse(time1)**;** Date date2 = format.parse(time2)**;** long diff = date2.getTime() - date1.getTime()**;** System.*out*.println(diff)**;** }  
  
}

8.Make rock/paper/scissors game.

package task1**;**import java.util.\***;**public class Task1 {  
  
  
 public static void main(String[] args) {  
  
 Scanner scan = new Scanner(System.*in*)**;** Random rand = new Random()**;** int randNum = rand.nextInt(**3**)**;** System.*out*.println("Enter your choice"  
 + "\n 0 for Rock"  
 + "\n 1 for paper"  
 + "\n 2 for secisor")**;** int choice = scan.nextInt()**;** if (choice == **0**){  
 if (randNum == **1**)  
 System.*out*.println("Computer chosse Paper. Computer won")**;** else if (randNum == **2**)  
 System.*out*.println("Computer chosse secisor. You won")**;** else  
 System.*out*.println("Draw")**;** }  
 else if (choice == **1**){  
 if (randNum == **0**)  
 System.*out*.println("Computer chosse Rock. You won")**;** else if (randNum == **2**)  
 System.*out*.println("Computer chosse secisor. Computer won")**;** else  
 System.*out*.println("Draw")**;** }  
 else if (choice == **2**){  
 if (randNum == **0**)  
 System.*out*.println("Computer chosse Rock. Computer won")**;** else if (randNum == **1**)  
 System.*out*.println("Computer chosse Paper .You won")**;** else  
 System.*out*.println("Draw")**;** }  
 else  
 System.*out*.println("You entered wrong choice")**;** }  
}  
   
}

9.Make a small quiz game. The design of the quiz can be similar to what is given hereunder. You can however make it more interesting. Use only decision structures (no loops, arrays, etc.)

a.Give three options of domainsto choose from; for example, science, geography, history. User will select one of the domains.

b.Ask the user five different MCQs from the chosen domain. For example, if the user has chosen ‘history’, your program will now ask 5 MCQs related to history.

c.For every right answer, 5 points shall be awarded to the user. For every wrong answer, 2 points shall be deducted.

d.Display total points earned by the user.

package com.company**;**import java.util.Scanner**;**public class quizGame {  
 public static void main(String args[]){  
 int choice**,** total\_num = **0;** Scanner scan = new Scanner(System.*in*)**;** int subjectName**;** System.*out*.println("Enter you domain. " +  
 "\n 1. Science " +  
 "\n 2. Geography " +  
 "\n 3. History: ")**;** subjectName = scan.nextInt()**;** if (subjectName == **1** ) {  
 System.*out*.println(":You Selected Science:")**;** System.*out*.println("Question Number 1" +  
 "\nOil, natural gas and coal are examples of" +  
 "\n 1. Fossil Fuels" +  
 "\n 2. Bio Fuels" +  
 "\n 3. Renewable Resources" +  
 "\n 4. Geothermal resources")**;** choice = scan.nextInt()**;** if (choice == **1**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 2" +  
 "\nWhat is the main cause of seasons on the Earth?" +  
 "\n 1. The distance between the Earth and the sun" +  
 "\n 2. Changes in the amount of energy coming from the sun" +  
 "\n 3. The tilt of the Earth's axis in relation to the sun" +  
 "\n 4. The speed that the Earth rotates around the sun")**;** choice = scan.nextInt()**;** if (choice == **3**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 3" +  
 "\nWhen large areas of forest are removed so land can be converted for other uses, such as farming, which of the following occurs?" +  
 "\n 1. Decreased carbon dioxide" +  
 "\n 2. Increased erosion" +  
 "\n 3. Greater oxygen production" +  
 "\n 4. Colder temperature")**;** choice = scan.nextInt()**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 4" +  
 "\nA car travels at a constant speed of 40 miles per hour. How far does the car travel in 45 minutes?" +  
 "\n 1. 25 miles" +  
 "\n 2. 30 miles" +  
 "\n 3. 35 miles" +  
 "\n 4. 40 miles")**;** choice = scan.nextInt()**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 5" +  
 "\nA magnifying glass is what type of lens?" +  
 "\n 1. Convex lens" +  
 "\n 2. Concave lens" +  
 "\n 3. Microscopic lens" +  
 "\n 4. Simple glass")**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("You got " + total\_num + " out of 25")**;** }  
 else if (subjectName == **2**) {  
 System.*out*.println(":You Selected Geography:")**;** System.*out*.println("Question Number 1" +  
 "\nWhat is the capital of Pakistan?" +  
 "\n 1. Karachi" +  
 "\n 2. Islamabad" +  
 "\n 3. Lahore" +  
 "\n 4. Peshawer")**;** choice = scan.nextInt()**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 2" +  
 "\n Where is Pakistan located?" +  
 "\n 1. Northeast Asia" +  
 "\n 2. Southern Asia" +  
 "\n 3. Central Asia" +  
 "\n 4. Southeast Asia")**;** choice = scan.nextInt()**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 3" +  
 "\nWhat percentage of the population of Pakistan lives in towns or cities?" +  
 "\n 1. 88%" +  
 "\n 2. 52%" +  
 "\n 3. 36%" +  
 "\n 4. 21%")**;** choice = scan.nextInt()**;** if (choice == **3**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 4" +  
 "\nHow big is Pakistan?" +  
 "\n 1. Twice the size of Texas" +  
 "\n 2. A little bigger than Delaware" +  
 "\n 3. Slightly smaller than Nevada" +  
 "\n 4. Somewhat less than twice the size of California")**;** choice = scan.nextInt()**;** if (choice == **4**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 5" +  
 "\nWhat are the countries that border Pakistan?" +  
 "\n 1. Afghanistan, China, Turkmenistan, and India" +  
 "\n 2. China, India, Iran, and Afghanistan" +  
 "\n 3. India, Turkmenistan, Iran, and Afghanistan" +  
 "\n 4. Iran, Afghanistan, Turkmenistan, and China")**;** choice = scan.nextInt()**;** if (choice == **2**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("You got " + total\_num + " out of 25")**;** }  
 else if (subjectName == **3** ) {  
 System.*out*.println(":You Selected History:")**;** System.*out*.println("Question Number 1" +  
 "\nWorld War I began in which year?" +  
 "\n 1. 1923" +  
 "\n 2. 1938" +  
 "\n 3. 1917" +  
 "\n 4. 1914")**;** choice = scan.nextInt()**;** if (choice == **4**)  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 2" +  
 "\nAdolf Hitler was born in which country?" +  
 "\n 1. Germany" +  
 "\n 2. France" +  
 "\n 3. Austria" +  
 "\n 4. Poland")**;** choice = scan.nextInt()**;** if (choice == '3')  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 3" +  
 "\nWho was the first Western explorer to reach China?" +  
 "\n 1. Magellan" +  
 "\n 2. Cook" +  
 "\n 3. Marco Polo" +  
 "\n 4. Sir Francis Drake")**;** choice = scan.nextInt()**;** if (choice == '3')  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 4" +  
 "\nWhat is the date of independence of Pakistan" +  
 "\n 1. 14th aug 1945" +  
 "\n 2. 14th aug 1941" +  
 "\n 3. 14th aug 1947" +  
 "\n 4. 14th aug 1946")**;** choice = scan.nextInt()**;** if (choice == '3')  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("Question Number 5" +  
 "\nHow many republics made up the former Soviet Union?" +  
 "\n 1. 10" +  
 "\n 2. 20" +  
 "\n 3. 12" +  
 "\n 4. 15")**;** choice = scan.nextInt()**;** if (choice == '4')  
 total\_num = total\_num + **5;** else  
 total\_num = total\_num - **2;** System.*out*.println("You got " + total\_num + " out of 25")**;** }  
  
 }  
}

10.Make Tic Tac Toe game, using only selection statements. Do not use loops.

package com.company**;**import java.util.Scanner**;**public class ticktack {  
 public static void main(String args[]){  
 Scanner scan = new Scanner(System.*in*)**;** int player1**,** player2**;** char place\_1 = '1'**,** place\_2 = '2' **,** place\_3 = '3'**,** place\_4 = '4'**,** place\_5 = '5'**,** place\_6 = '6'**,** place\_7 = '7'**,** place\_8 = '8'**,** place\_9 = '9'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** System.*out*.println("Player\_1 please select place: ")**;** player1 = scan.nextInt()**;** if (player1 == **1**) {  
 place\_1 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **2**) {  
 place\_2 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **3**) {  
 place\_3 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **4**) {  
 place\_4 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **5**) {  
 place\_5 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **6**) {  
 place\_6 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **7**) {  
 place\_7 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **8**) {  
 place\_8 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **9**) {  
 place\_9 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** System.*out*.println("Player\_2 please select place: ")**;** player2 = scan.nextInt()**;** if (player2 == **1**) {  
 place\_1 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **2**) {  
 place\_2 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **3**) {  
 place\_3 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **4**) {  
 place\_4 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **5**) {  
 place\_5 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **6**) {  
 place\_6 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **7**) {  
 place\_7 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **8**) {  
 place\_8 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **9**) {  
 place\_9 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** System.*out*.println("Player\_1 please select place: ")**;** player1 = scan.nextInt()**;** if (player1 == **1**) {  
 place\_1 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **2**) {  
 place\_2 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **3**) {  
 place\_3 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **4**) {  
 place\_4 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **5**) {  
 place\_5 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **6**) {  
 place\_6 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **7**) {  
 place\_7 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **8**) {  
 place\_8 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **9**) {  
 place\_9 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X' ) {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game in Progress")**;** System.*out*.println("Player\_2 please select place: ")**;** player2 = scan.nextInt()**;** if (player2 == **1**) {  
 place\_1 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **2**) {  
 place\_2 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **3**) {  
 place\_3 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **4**) {  
 place\_4 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **5**) {  
 place\_5 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **6**) {  
 place\_6 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **7**) {  
 place\_7 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **8**) {  
 place\_8 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **9**) {  
 place\_9 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X' ) {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game in progress")**;** System.*out*.println("Player\_1 please select place: ")**;** player1 = scan.nextInt()**;** if (player1 == **1**) {  
 place\_1 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **2**) {  
 place\_2 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **3**) {  
 place\_3 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **4**) {  
 place\_4 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **5**) {  
 place\_5 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **6**) {  
 place\_6 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **7**) {  
 place\_7 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **8**) {  
 place\_8 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **9**) {  
 place\_9 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X' ) {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game in Progress")**;** System.*out*.println("Player\_2 please select place: ")**;** player2 = scan.nextInt()**;** if (player2 == **1**) {  
 place\_1 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **2**) {  
 place\_2 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **3**) {  
 place\_3 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **4**) {  
 place\_4 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **5**) {  
 place\_5 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **6**) {  
 place\_6 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **7**) {  
 place\_7 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **8**) {  
 place\_8 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **9**) {  
 place\_9 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X') {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game In progress")**;** System.*out*.println("Player\_1 please select place: ")**;** player1 = scan.nextInt()**;** if (player1 == **1**) {  
 place\_1 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **2**) {  
 place\_2 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **3**) {  
 place\_3 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **4**) {  
 place\_4 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **5**) {  
 place\_5 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **6**) {  
 place\_6 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **7**) {  
 place\_7 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **8**) {  
 place\_8 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **9**) {  
 place\_9 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X') {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game In progress")**;** System.*out*.println("Player\_2 please select place: ")**;** player2 = scan.nextInt()**;** if (player2 == **1**) {  
 place\_1 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **2**) {  
 place\_2 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **3**) {  
 place\_3 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **4**) {  
 place\_4 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **5**) {  
 place\_5 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player2 == **6**) {  
 place\_6 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **7**) {  
 place\_7 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **8**) {  
 place\_8 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player2 == **9**) {  
 place\_9 = 'X'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X') {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Game In progress")**;** System.*out*.println("Player\_1 please select place: ")**;** player1 = scan.nextInt()**;** if (player1 == **1**) {  
 place\_1 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **2**) {  
 place\_2 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **3**) {  
 place\_3 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **4**) {  
 place\_4 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **5**) {  
 place\_5 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
  
 else if (player1 == **6**) {  
 place\_6 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **7**) {  
 place\_7 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **8**) {  
 place\_8 = 'O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else if (player1 == **9**) {  
 place\_9 ='O'**;** System.*out*.println("O for first player and X for Second player:" +  
 "\n" + place\_1 + " | " + place\_2 + " | " + place\_3 +  
 "\n--|---|--" +  
 "\n"+ place\_4 + " | " + place\_5 + " | " + place\_6 +  
 "\n--|---|--" +  
 "\n"+ place\_7 + " | " + place\_8 + " | " + place\_9 )**;** }  
 else  
 System.*out*.println("You picked wrong location")**;** if (place\_1 == 'O' && place\_2 == 'O' && place\_3 == 'O' || place\_1 == 'O' && place\_4 == 'O' && place\_7 == 'O' || place\_1 == 'O' && place\_5 == 'O' && place\_9 == 'O' || place\_4 == 'O' && place\_5 == 'O' && place\_6 == 'O' || place\_7 == 'O' && place\_8 == 'O' && place\_9 == 'O' || place\_3 == 'O' && place\_6 == 'O' && place\_9 == 'O' || place\_2 == 'O' && place\_5 == 'O' && place\_8 == 'O') {  
 System.*out*.print("Player 1 won the game")**;** System.*exit*(**0**)**;** }  
 else if (place\_1 == 'X' && place\_2 == 'X' && place\_3 == 'X' || place\_1 == 'X' && place\_4 == 'X' && place\_7 == 'X' || place\_1 == 'X' && place\_5 == 'X' && place\_9 == 'X' || place\_4 == 'X' && place\_5 == 'X' && place\_6 == 'X' || place\_7 == 'X' && place\_8 == 'X' && place\_9 == 'X' || place\_3 == 'X' && place\_6 == 'X' && place\_9 == 'X' || place\_2 == 'X' && place\_5 == 'X' && place\_8 == 'X' ) {  
 System.*out*.println("Player 2 won the game")**;** System.*exit*(**0**)**;** }  
 else  
 System.*out*.println("Draw")**;** }  
}