# java week 9 assignment solutions

1sol.

// Declare the 5X5 2D array to store the input

char original[][]= new char[5][5];

// Input 2D Array using Scanner Class and check data validity

for(int line=0;line<5; line++){

String input = sc.nextLine();

char seq[] = input.toCharArray();

if(seq.length==5){

for(int i=0;i<5;i++){

if(seq[i]=='0' || seq[i]=='1'){

original[line][i]=seq[i];

if(line==4 && i==4)

flipflop(original);

}

else{

System.out.print("Only 0 and 1 supported.");

break;

}

}

}else{

System.out.print("Invalid length");

break;

}

**2nd sol.**

**// Declaring 5x5 2D char array to store input**

**char original[][]= new char[5][5];**

**// Declaring 5x5 2D char array to store reflection**

**char reflection[][]= new char[5][5];**

**// Input 2D Array using Scanner Class**

**for(int line=0;line<5; line++){**

**String input = sc.nextLine();**

**char seq[] = input.toCharArray();**

**if(seq.length==5){**

**for(int i=0;i<5;i++){**

**original[line][i]=seq[i];**

**}**

**}**

**}**

**// Performing the reflection operation**

**for(int i=0; i<5;i++){**

**for(int j=0; j<5;j++){**

**reflection[i][j]=original[i][4-j];**

**}**

**}**

**// Output the 2D Reflection Array**

**for(int i=0; i<5;i++){**

**for(int j=0; j<5;j++){**

**System.out.print(reflection[i][j]);**

**}**

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

**}**

**3rd sol.**

**char arr[][]= new char[5][5];**

**// Input 2D Array using Scanner Class**

**for(int line=0;line<5; line++){**

**String input = sc.nextLine();**

**char seq[] = input.toCharArray();**

**if(seq.length==5){**

**for(int i=0;i<5;i++){**

**arr[line][i]=seq[i];**

**}**

**}else{**

**System.out.print("Wrong Input!");**

**System.exit(0);**

**}**

**}**

**// Declaring the array to store Transition**

**char tra[][] = new char[5][5];**

**String outer[]={"00","10","20","30",**

**"40","41","42","43",**

**"44","34","24","14",**

**"04","03","02","01"};**

**String inner[]={"11","21","31","32",**

**"33","23","13","12"};**

**// 45-Degree rotation**

**for(int i=0;i<5;i++){**

**for(int j=0;j<5;j++){**

**// Transform outer portion**

**for(int k=0; k<outer.length; k++){**

**char indices[]=outer[k].toCharArray();**

**int a = Integer.parseInt(String.valueOf(indices[0]));**

**int b = Integer.parseInt(String.valueOf(indices[1]));**

**if(a==i && b==j){**

**if(k==15){k=1;}**

**else if(k==14){k=0;}**

**else {k+=2;}**

**indices=outer[k].toCharArray();**

**a = Integer.parseInt(String.valueOf(indices[0]));**

**b = Integer.parseInt(String.valueOf(indices[1]));**

**tra[a][b] = arr[i][j];**

**break;**

**}**

**}**

**// Transform inner portion**

**for(int k=0; k<inner.length; k++){**

**char indices[]=inner[k].toCharArray();**

**int a = Integer.parseInt(String.valueOf(indices[0]));**

**int b = Integer.parseInt(String.valueOf(indices[1]));**

**if(a==i && b==j){**

**if(k==7){k=0;}**

**else {k+=1;}**

**indices=inner[k].toCharArray();**

**a = Integer.parseInt(String.valueOf(indices[0]));**

**b = Integer.parseInt(String.valueOf(indices[1]));**

**tra[a][b] = arr[i][j];**

**break;**

**}**

**}**

**// Keeping center same**

**tra[2][2] = arr[2][2];**

**}**

**}**

**// Print the transformed output**

**for(int i=0;i<5;i++){**

**for(int j=0;j<5;j++){**

**System.out.print(tra[i][j]);**

**}**

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

**}**

**4th sol.**

**char seq[] = input.toCharArray();**

**int outflag=0;**

**// Start the mapping process for each input character**

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

**seq[i]=gui\_map(seq[i]);**

**}**

**//Print Mapped GUI (remove comment to see the mapped sequence input)**

**/\***

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

**System.out.print(seq[i]);**

**}**

**\*/**

**// Use double type of values for entire calculation**

**double operand1=0.0;**

**String o1="";**

**double operand2=0.0;**

**String o2="";**

**double output=0.0;**

**// Perform calculaton operations**

**outerloop:**

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

**int r=0;**

**if(seq[i]=='+'||seq[i]=='-'||seq[i]=='/'||seq[i]=='X'||seq[i]=='='){**

**for(int j=0; j<i; j++){**

**o1+=Character.toString(seq[j]);**

**}**

**operand1=Double.parseDouble(o1);**

**for(int k=i+1; k<seq.length; k++){**

**if(seq[k]=='='){**

**outflag=1;**

**operand2=Double.parseDouble(o2);**

**if(seq[i]=='+'){**

**output=operand1+operand2;**

**}else if(seq[i]=='-'){**

**output=operand1-operand2;**

**}else if(seq[i]=='/'){**

**output=operand1/operand2;**

**}else if(seq[i]=='X'){**

**output=operand1\*operand2;**

**}**

**break outerloop;**

**}else{**

**o2+=Character.toString(seq[k]);**

**}**

**}**

**}**

**}**

**// Check if output is available and print the output**

**if(outflag==1)**

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

**5th sol.**

// Declare and initialize the required variable(s)

int i=0;

int j=0;

double output=0;

// Split the input string into character array

char seq[] = input.toCharArray();

/\*

Use some method to separate the two operands

and then perform the required operation.

\*/

for(int a=0; a<seq.length; a++){

if(seq[a]=='+'){

i= Integer.parseInt(input.substring(0,a));

j= Integer.parseInt(input.substring(a+1,seq.length));

output = (double)i+j;

}else if(seq[a]=='-'){

i= Integer.parseInt(input.substring(0,a));

j= Integer.parseInt(input.substring(a+1,seq.length));

output = (double)i-j;

}else if(seq[a]=='/'){

i= Integer.parseInt(input.substring(0,a));

j= Integer.parseInt(input.substring(a+1,seq.length));

output = (double)i/j;

}else if(seq[a]=='\*'){

i= Integer.parseInt(input.substring(0,a));

j= Integer.parseInt(input.substring(a+1,seq.length));

output = (double)i\*j;

}

}

// Print the output as stated in the question

System.out.print(input+" = " + Math.round(output));