**Module-1**

**Assignment**

**Question-1) Write a programme to generate 9’s table.**

**CODE:**

**package** Modele\_1;

**import** java.io.\*;

**public** **class** multiples\_of\_9 {

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

InputStreamReader isr=**new** InputStreamReader(System.***in***);

BufferedReader br=**new** BufferedReader(isr);

System.***out***.println("Enter the number: ");

**int** n=Integer.*parseInt*(br.readLine());

**int** i,p=1;

**for**(i=1;i<=n;i++) {

p=9\*i;

System.***out***.println(9+"x"+i+"="+p);

}

}

}

**OUTPUT:**

Enter the number:

10

9x1=9

9x2=18

9x3=27

9x4=36

9x5=45

9x6=54

9x7=63

9x8=72

9x9=81

9x10=90

**Question-2)** **Create an array of 10 integers and print only the even values.**

**CODE:**

**package** Modele\_1;

**import** java.io.\*;

**public** **class** array\_of\_even\_numbers {

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

InputStreamReader isr=**new** InputStreamReader(System.***in***);

BufferedReader br=**new** BufferedReader(isr);

System.***out***.println("Enter the number of elements in the array: ");

**int** n=Integer.*parseInt*(br.readLine());

**int** ar[]=**new** **int**[n];

**int** i;

System.***out***.println("Enter the elements in the array: ");

**for**(i=0;i<n;i++) {

ar[i]=Integer.*parseInt*(br.readLine());

}

System.***out***.println("The even elements in the array: ");

**for**(i=0;i<n;i++) {

**if**(ar[i]%2==0) {

System.***out***.println(ar[i]);

}

}

}

}

**OUTPUT:**

Enter the number of elements in the array:

5

Enter the elements in the array:

10

15

17

16

13

The even elements in the array:

10

16

**Question-3)** **Create an integer array of m rows and n columns (where m, n < 10) and print only the odd values.**

**CODE:**

**package** Modele\_1;

**import** java.io.\*;

**public** **class** odd\_number\_matrix {

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

InputStreamReader isr=**new** InputStreamReader(System.***in***);

BufferedReader br=**new** BufferedReader(isr);

System.***out***.println("Enter the number of rows and columns in the matrix: ");

**int** m=Integer.*parseInt*(br.readLine());

**int** n=Integer.*parseInt*(br.readLine());

**int** ar[][]=**new** **int**[m][n];

**int** i,j;

System.***out***.println("Enter the elements inside the matrix: ");

**for**(i=0;i<m;i++) {

**for**(j=0;j<n;j++) {

ar[i][j]=Integer.*parseInt*(br.readLine());

}

}

System.***out***.println("The old elements in the matrix: ");

**for**(i=0;i<m;i++) {

**for**(j=0;j<n;j++) {

**if**(ar[i][j]%2!=0) {

System.***out***.println(ar[i][j]);

}

}

}

}

}

**OUTPUT:**

Enter the number of rows and columns in the matrix:

3

3

Enter the elements inside the matrix:

1

2

3

4

5

6

7

8

9

The old elements in the matrix:

1

3

5

7

9

**Question-4)** **You need to print integers till 20, which loop construct is the best for this?**

**Ans:** We can use for loop, while loop as well as do-while loop for this task. But I would prefer to use for loop for this particular task.

**CODE:**

**package** Modele\_1;

**import** java.io.\*;

**public** **class** printing\_integers {

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

InputStreamReader isr=**new** InputStreamReader(System.***in***);

BufferedReader br=**new** BufferedReader(isr);

System.***out***.println("Enter the number: ");

**int** n=Integer.*parseInt*(br.readLine());

**int** i;

System.***out***.printf("The numbers upto %d: ",n);

**for**(i=1;i<=n;i++) {

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

}

}

}

**OUTPUT:**

Enter the number:

20

The numbers upto 20: 1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

**Question-5 & 6)** **Create 2 integer matrices of m rows and n column each and add these 2 matrices.**

**For the above problem add the relevant code to check valid inputs. Hint: To add matrices they must be of equal dimension. [Solution not provided for this one]**

**CODE:**

**package** Modele\_1;

**import** java.io.\*;

**public** **class** matrix\_addition {

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

InputStreamReader isr=**new** InputStreamReader(System.***in***);

BufferedReader br=**new** BufferedReader(isr);

System.***out***.println("Enter the number of rows and columns of first matrix: ");

**int** m=Integer.*parseInt*(br.readLine());

**int** n=Integer.*parseInt*(br.readLine());

System.***out***.println("Enter the number of rows and columns of second matrix: ");

**int** p=Integer.*parseInt*(br.readLine());

**int** q=Integer.*parseInt*(br.readLine());

**if**(m!=p||n!=q) {

System.***out***.println("Addition of matrices not possible");

}

**else** {

**int** a[][]=**new** **int**[m][n];

**int** b[][]=**new** **int**[p][q];

**int** c[][]=**new** **int**[m][n];

**int** i=0,j=0;

System.***out***.println("Enter the elements of the first matrix: ");

**for**(i=0;i<m;i++) {

**for**(j=0;j<n;j++) {

a[i][j]=Integer.*parseInt*(br.readLine());

}

}

System.***out***.println("Enter the elements of the second matrix: ");

**for**(i=0;i<p;i++) {

**for**(j=0;j<q;j++) {

b[i][j]=Integer.*parseInt*(br.readLine());

}

}

System.***out***.println("The resultant matrix is: ");

**for**(i=0;i<m;i++) {

**for**(j=0;j<n;j++) {

c[i][j]=a[i][j]+b[i][j];

}

}

**for**(i=0;i<m;i++) {

**for**(j=0;j<n;j++) {

System.***out***.print(c[i][j]+"\t");

}

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

}

}

}

}

**OUTPUT:**

Enter the number of rows and columns of first matrix:

2

3

Enter the number of rows and columns of second matrix:

2

3

Enter the elements of the first matrix:

1

2

3

4

5

6

Enter the elements of the second matrix:

6

5

4

3

2

1

The resultant matrix is:

7 7 7

7 7 7