**ANSWERS TO TASK GIVEN:**

**NUMBER 1**

**// Java program to find missing Number**

**class Main {**

**// Function to ind missing number**

**static int getMissingNo(int k[], int n)**

**{**

**int i, total;**

**total = (n + 1) \* (n + 2) / 2;**

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

**total -= k[i];**

**return total;**

**}**

**/\* program to test above function \*/**

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

**{**

**int k[] = { 3, 5, 4, 1 };**

**int miss = getMissingNo(k, 4);**

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

**}**

**}**

**NUMBER 2**

**// Java implementation of the approach**

**class Main**

**{**

**// Function to return the string after**

**// reversing the alternate k characters**

**static String revAlternateK(String s,**

**int k, int len)**

**{**

**for (int i = 0; i < s.length();)**

**{**

**// If there are less than k characters**

**// starting from the current position**

**if (i + k > len)**

**break;**

**// Reverse first k characters**

**s = s.substring(0, i) + new String(new StringBuilder(**

**s.substring(i, i + k)).reverse()) +**

**s.substring(i + k);**

**// Skip the next k characters**

**i += 2 \* k;**

**}**

**return s;**

**}**

**// Driver code**

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

**{**

**String s = "Lorem ipsum dolor sit amet, consectetur adipiscing elit ";**

**int len = s.length();**

**int k = 4;**

**System.out.println(revAlternateK(s, k, len));**

**}**

**}**

**NUMBER 3(a)**

CREATE DATABASE education;

USE employment;

CREATE TABLE `course` (

`courseid` int(11) NOT NULL,

`name` varchar(250) NOT NULL,

`institution` int(11) NOT NULL

PRIMARY KEY(courseid)

)

CREATE TABLE `institution` (

`institutionid` int(11) NOT NULL,

`name` varchar(250) NOT NULL

PRIMARY KEY(institutionid)

)

CREATE TABLE `student` (

`studentid` int(11) NOT NULL,

`name` varchar(250) NOT NULL,

`course` int(11) NOT NULL

PRIMARY KEY(studentid)

)

ALTER TABLE `course`

ADD CONSTRAINT `course\_relation` FOREIGN KEY (`courseid`) REFERENCES `institution` (`institutionid`);

ALTER TABLE `student`

ADD CONSTRAINT `student\_relation` FOREIGN KEY (`studentid`) REFERENCES `course` (`courseid`);

COMMIT;

**NUMBER 3(b)**

SELECT institution, course INNER JOIN student ON institution.institutionid = course.couseid WHERE student.Studentid = NOT NULL