**Assignment: Java IO**

**1.Suppose we wish to process survey results that are stored in a file. This exercise requires two separate programs. First, create an application that prompts the user for survey responses and outputs**

**each response to a file. Use a Formatter to create a file called “numbers.txt” . Each integer should be**

**written using method format . Then write a program to read the survey responses from**

**numbers.txt . The responses should be read from the file by using a Scanner . Use method nextInt to**

**input one integer at a time from the file. The program should continue to read responses until it**

**reaches the end of the file. The results should be output to the text file "output.txt" .**

**Answer:**

**Program (1) SurveyResultsOutput.java**

import java.io.\*;

import java.util.\*;

public class SurveyResultsOutput {

public static void main(String[] args) {

try (Scanner input = new Scanner(System.in);

Formatter output = new Formatter("numbers.txt")) {

System.out.println("Enter all numbers for file: ");

int number = input.nextInt();

while (number != 0) {

output.format("%d%n", number);

number = input.nextInt();

}

} catch (FileNotFoundException e) {

System.out.println("File not found");

}

}

}

**Program (2) SurveyResultsInput.java**

import java.io.\*;

import java.util.\*;

public class SurveyResultsInput {

public static void main(String[] args) {

try (Scanner input = new Scanner(new File("numbers.txt"));

Formatter output = new Formatter("output.txt")) {

int number = input.nextInt();

output.format("%d%n", number);

while (input.hasNext()) {

number = input.nextInt();

output.format("%d%n", number);

}

} catch (FileNotFoundException e) {

System.out.println("File not found");

}

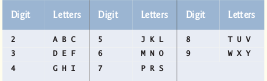
}

}

**2.Write a program that, given a four-digit number, uses a PrintStream object to write to a file**

**every possible four-letter word combination corresponding to that number. There are 81**

**such combinations. Avoid phone numbers with the digits 0 and 1.**



**Answer:**

import java.io.\*;

import java.util.\*;

public class Question2

{

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

{

Scanner sc = new Scanner(System.in);

PrintStream pw = new PrintStream("output.txt");

try{

char[][] letters = new char[][]{

{' ', ' ', ' '},

{' ', ' ', ' '},

{'A', 'B', 'C'},

{'D', 'E', 'F'},

{'G', 'H', 'I'},

{'J', 'K', 'L'},

{'M', 'N', 'O'},

{'P', 'R', 'S'},

{'T', 'U', 'V'},

{'W', 'X', 'Y'}

};

System.out.println("Enter a four-digit number: ");

int number = sc.nextInt();

int[] digits = new int[4];

int i=3;

while (number > 0) {

digits[i] = number % 10;

number /= 10;

i--;

}

for(int d : digits){

if(d == 0 || d == 1){

throw new Exception("Invalid number: Try again");

}

}

printWords(digits, letters, pw, 0, "");

} catch(Exception e){

System.out.println(e.getMessage());

main(args);

} finally{

sc.close();

pw.close();

}

}

public static void printWords(int[] digits, char[][] letters, PrintStream pw, int index, String word){

if(index == digits.length){

pw.format(“%s%n”,word);

return;

}

for(int i=0; i<3; i++){

printWords(digits, letters, pw, index+1, word + letters[digits[index]][i]);

}

}

}