/\*\* =======================================================================

\* Class:Donut\_Survey ExSB.2 Pg.#.# Author: Yin Linhai

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\* This program takes an *x* number of donuts which are surveyed by an *n* number of students, and then calculates the

\* percentage of the ranking if the donuts were ranked from 1-4 for each ranking out.

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\* Course:Computer Science 201Teacher:Mr Blakey

\* School:Sir Winston Churchill High School, Calgary, Alberta, Canada

\* Language: Java SE 7.0Target Operating System: Java Virtual Machine

\* System:Intel Celeron 3GHz running under Windows 7 IDE: Eclipse 4.2

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**package** donut\_Survey;

**import** java.util.Scanner;

**public** **class** Donut\_Survey {

/\*\*

\* **@param** args

\*/

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

//variable initialization

**int** [][]rsp;

**int** studentsLength, denominator, s = 0;

//scanner construction

Scanner scan = **new** Scanner(System.*in*);

Scanner scan1 = **new** Scanner(System.*in*);

//asking for # of donuts and input value as a length

System.*out*.println("How many donut types are there?");

String []donut = **new** String [scan.nextInt()];

//ask what each donut is and put into an array

**for** (**int** d = 0; d<donut.length; d++) {

System.*out*.println("What is donut number " + (d+1));

donut[d] = scan1.nextLine();

}

//ask how many students surveyed and make that the length of an array

System.*out*.println("How many students did you survey?");

studentsLength = scan1.nextInt();

denominator = studentsLength;

rsp = **new** **int**[donut.length][studentsLength];

//the donut counter for the array

**for** (**int** d = 0; d<donut.length; d++) {

//the student counter for the array

**while** (s<studentsLength) {

//local variable declaration

**int** input;

//ask for d donut what s student had ranked it

System.*out*.println("What is the rank of the " + donut[d] + " donut for person " + (s+1) + "?");

input = scan.nextInt();

//so that people input the right ranking

**if** (input>4 || input<1) {

//this sends the loop back without any data being saved

System.*out*.println("Please rank within 1-4 (1 is best, 4 is worst)");

} **else** {

//this saves the rank into the array and continues the loop

rsp[d][s] = input;

s++;

}

}

//set s as 0 again

s = 0;

}

//print out header

System.*out*.println("Donut\tPercent");

**for** (**int** d = 0; d<donut.length; d++) {

//print out what kind of donut the first table will be

System.*out*.println(donut[d] + " ");

//count for all 4 ranks

**for** (**int** r = 0; r<4; r++) {

//initialize a variable

**int** count = 0;

//loop that checks for if the value is the same and then adds to count

**for** (**int** x = 0; x<studentsLength; x++) {

**if** ((rsp[d][x]) == (r+1)) {

count++;

}

}

//solve for percent

**double** percent = (((**double**)count/(**double**)denominator) \* 100);

//print out percentage and the rank

System.*out*.println((r+1) + "\t" + String.*format*("%5.2f",percent));

}

}

}

}