01. Christmas Spirit

**package** ExamPrep.RetakeMidExam18December2018;  
  
**import** java.util.Scanner;  
  
**public class** P1ChristmasSpirit {  
 **public static void** main(String[] args) {  
 Scanner scanner = **new** Scanner(System.***in***);  
  
 **int** quantity = Integer.*parseInt*(scanner.nextLine());  
 **int** days = Integer.*parseInt*(scanner.nextLine());  
  
  
 **int** budget = 0;  
 **int** spirit = 0;  
  
 **for** (**int** i = 1; i <= days; i++) {  
 **if** (i % 11 == 0) {  
 quantity += 2;  
  
 }  
 **if** (i % 2 == 0) {  
 budget += quantity \* 2;  
 spirit += 5;  
 }  
 **if** (i % 3 == 0) {  
 budget += quantity \* 8;  
 spirit += 13;  
 }  
 **if** (i % 5 == 0) {  
 budget += quantity \* 15;  
 spirit += 17;  
 **if** (i % 3 == 0) {  
 spirit += 30;  
 }  
 }  
 **if** (i % 10 == 0) {  
  
 budget += 23;  
 spirit -= 20;  
  
 }  
  
  
 }  
 **if** (days % 10 == 0) {  
 spirit -= 30;  
 }  
 System.***out***.printf(**"Total cost: %d\n"** +  
 **"Total spirit: %d"**, budget, spirit);  
 }  
}

## 02. Santa's List

**package** ExamPrep.RetakeMidExam18December2018;  
  
 **import** java.util.Arrays;  
 **import** java.util.List;  
 **import** java.util.Scanner;  
 **import** java.util.stream.Collectors;  
  
**public class** P2SantasList {  
 **public static void** main(String[] args) {  
 Scanner scanner = **new** Scanner(System.***in***);  
  
 List<String> kids = Arrays.*stream*(scanner.nextLine().split(**"&"**)).collect(Collectors.*toList*());  
  
 String input = scanner.nextLine();  
 **while** (!input.equals(**"Finished!"**)) {  
 String[] cmd = input.split(**" "**);  
 **if** (cmd[0].equals(**"Bad"**)) {  
 **if** (kids.contains(cmd[1])) {  
 input = scanner.nextLine();  
 **continue**;  
 } **else** {  
 kids.add(0, cmd[1]);  
 }  
 } **else if** (cmd[0].equals(**"Good"**)) {  
 **if** (kids.contains(cmd[1])) {  
 kids.remove(cmd[1]);  
 }  
 } **else if** (cmd[0].equals(**"Rename"**)) {  
 **if** (kids.contains(cmd[1])) {  
 kids.add(kids.indexOf(cmd[1]), cmd[2]);  
 kids.remove(cmd[1]);  
 }  
 } **else if** (cmd[0].equals(**"Rearrange"**)) {  
 **if** (kids.contains(cmd[1])) {  
 kids.remove(cmd[1]);  
 kids.add(kids.size(), cmd[1]);  
 }  
 }  
  
 input = scanner.nextLine();  
 }  
 System.***out***.println(String.*join*(**", "**,kids));  
 }  
}

## 03. Present Delivery

**package** ExamPrep.RetakeMidExam18December2018;  
  
**import** java.util.Arrays;  
**import** java.util.Scanner;  
  
**public class** P3PresentDelivery {  
 **public static void** main(String[] args) {  
 Scanner scanner = **new** Scanner(System.***in***);  
  
 **int**[] field = Arrays.*stream*(scanner.nextLine().split(**"@"**)).mapToInt(Integer::*parseInt*).toArray();  
 String input = **""**;  
 **int** currentHouse = 0;  
  
 **while** (!**"Merry Xmas!"**.equals(input = scanner.nextLine())) {  
 String[] data = input.split(**" "**);  
 String command = data[0];  
 **int** jumpLength = Integer.*parseInt*(data[1]);  
 currentHouse += jumpLength;  
 **if** (command.equals(**"Jump"**)) {  
 **while** (currentHouse >= field.**length**) {  
 currentHouse -= field.**length**;  
 }  
 **if** (field[currentHouse] == 0) {  
 System.***out***.println(String.*format*(**"House %d will have a Merry Christmas."**, currentHouse));  
 **continue**;  
 }  
 field[currentHouse] -= 2;  
 **if** (field[currentHouse] < 0) {  
 field[currentHouse] = 0;  
 }  
  
 }  
 }  
 System.***out***.println(String.*format*(**"Santa's last position was %d."**, currentHouse));  
 **int** sum = Arrays.*stream*(field).sum();  
 **if** (sum == 0) {  
 System.***out***.println(**"Mission was successful."**);  
 } **else** {  
 **long** numb =field.**length** - Arrays.*stream*(field).filter(e -> e == 0).count();  
 System.***out***.println(String.*format*(**"Santa has failed %d houses."**,numb));  
 }  
 }  
}