# Project report

# Overview

The purpose of this program is to create a computerised system is required to store, manipulate, and present information about employees and how many cakes have been covered. I have created 4 different classes described below.

## Employee

Firstly I have created the variables for the data stored for the employees such as the name, cake covered and the employee type such as quality controller. Then I created the constructors with two different ones so that the user must only specify the employee type if they are a quality controller.

Text

Description automatically generated

Secondly I created the getters. The getter method returns the value of the attribute. They are useful because it encapsulates the behaviour associated with getting the property, this allows additional functionality to be added more easily later. It hides the internal representation of the property while exposing a property using an alternative representation.

Text

Description automatically generated

Next I made the functions to calculate pay based on the specification so employees are paid 10p for the first 50 cakes they cover, and then 15p for all subsequent cakes covered. I also created a format pay function so that it displays the pay to two decimal places and the £ sign is included. I also implemented quality controllers which have the same wage rates and rules as a standard employee plus earn an additional 12% for being a quality controller. I also added an update functions so that the user can update the cakes which will cause the pay to be increased with the good cakes and decreased with the bad cakes, the penalty for cakes not being suitable for sale due to human error is their total number of cakes being reduced by the number of unsuitable cakes multiplied by two.

Text

Description automatically generated

Finally for the employee files I added the overrides which is important for the sorting function in the table where the data is sorted firstly in descending order of the number of cakes covered, if there are two employees with the same number then additionally sort those employees by name.

Text

Description automatically generated

## EmployeeTable

Now I moved onto the table for the employees. It allows each employee to be added to the team and in a neat table, displays the employees’ names, the number of cakes covered and their wages. Below the table, it display a summary of the team’s performance with the total number of cakes covered and the total amount of wages to be paid. I also added the employee type so that the quality controllers are specified.

Text

Description automatically generated

Finally I added the addscore function so that the scores will be updated as well as the sort using the collections package.

Graphical user interface, text

Description automatically generated

Then I created the tablemain.java so that I can accurately test the data with 6 individuals specified in the brief as well as the quality controller.

I have tested the program with a variety of inputs shown in the screenshots below.

The reason why I have done testing is to verify that the code works how the client describes and to ensure that any bugs are filtered out.

Appendices

More detail extra info