

Hours Bank

By Andrew White

Overview

A GUI program built with Python, Tkinter and Sqlite, that tracks employees additional working hours.

Introduction

Restaurants such as Fish and Chip shops are very seasonal with high demand in the holiday season and low demand out of that period. This requires staff to work more hours in peak season and fewer in the off, greatly affecting their monthly income throughout the year.

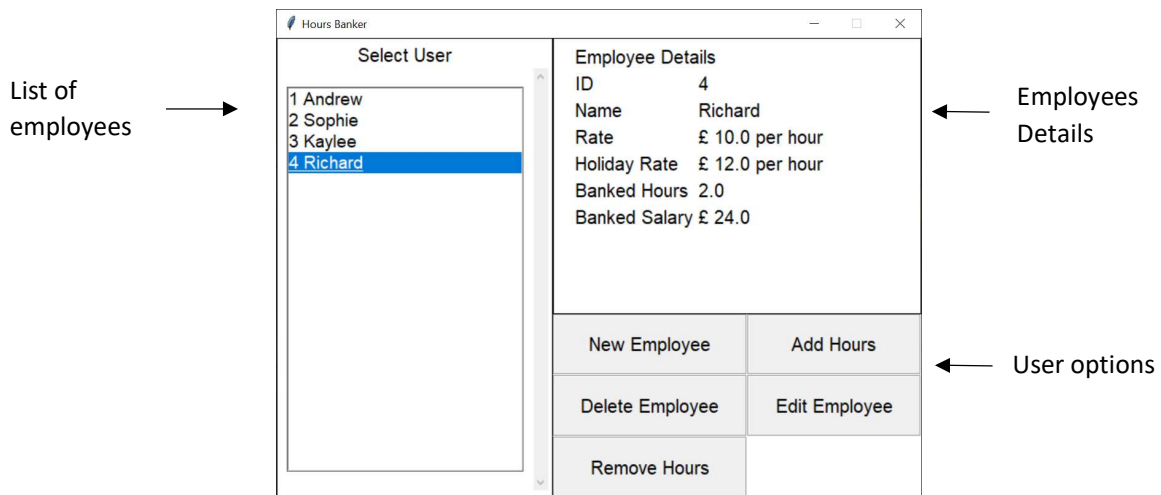
The Hours Bank software allows administrators of the company to keep a record of the extra hours employees have worked and don't want to get paid for immediately, so they can choose to be paid at a later date when available hours are lower. The employee can choose to bank both peak and off-peak hours.

Development

Hours Bank was developed using Python 3.6.4, sqlite3 and TKinter for Python3 on the atom editor. Created, tested and run on Windows 10. All data is saved to the sqlite database.

Operation

User Interface



The main user interface allows the user to select the employee that they want to view or edit. Once the user is selected in the list box on the left their details are displayed in the upper right panel. The details include:

- ID – Unique employee number
- Name
- Rate – Standard hourly rate of pay
- Holiday Rate – holiday hourly rate of pay
- Banked hours – how many hours holiday or non that the employee has asked to be banked and has not currently been paid for

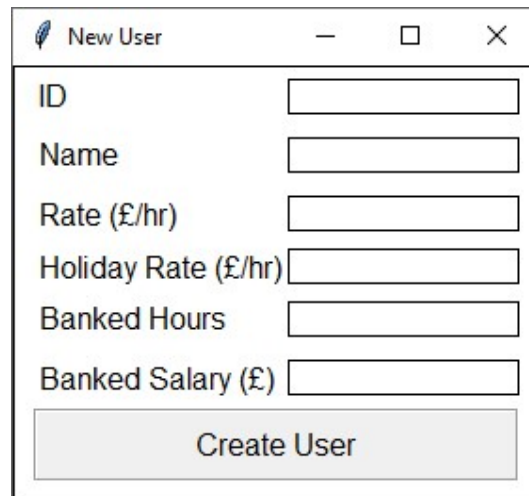
- Banked salary – the total amount owed to the employee that they have elected to Bank

In the lower right panel of the program the user can select 5 different options:

- New Employee – Add a new employee to the system
- Add Hours – Add more hours to the selected employees banked hours
- Delete Employee – Remove the selected employee from the system
- Edit Employee – Edit the standard and holiday hourly rate of the employee
- Remove Hours – When the employee decides they want to be paid for banked hours remove these hours from the system

New Employee

If the administrator selects the new employee option, the following screen is displayed.

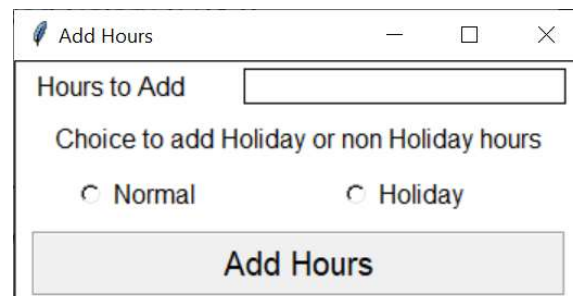


The 'New User' dialog box is a standard Windows-style window with a title bar containing a feather icon, the text 'New User', and standard minimize, maximize, and close buttons. The main area contains six labeled text input fields stacked vertically: 'ID', 'Name', 'Rate (£/hr)', 'Holiday Rate (£/hr)', 'Banked Hours', and 'Banked Salary (£)'. At the bottom of the dialog is a large, light-gray button labeled 'Create User'.

The user can then fill in all the new employee data into the fields. When they click create user the data will be saved to the sqlite database. The form has data validation in it to ensure that the user enters all the data and the right type of data in each field. The name field will not accept numeric characters or symbols. The Rate, Holiday Rate, Banked Hours, Banked Salary hours fields will only accept numerical characters and a decimal point. Once the create user button is clicked the new employee will appear immediately in the select user list box in the main interface.

Add Hours

When the user clicks the Add Hours button on the main interface, they will see the following:



The 'Add Hours' dialog box is a standard Windows-style window with a title bar containing a feather icon, the text 'Add Hours', and standard minimize, maximize, and close buttons. The main area contains a labeled text input field for 'Hours to Add'. Below this is a label 'Choice to add Holiday or non Holiday hours' followed by two radio button options: 'Normal' and 'Holiday'. At the bottom of the dialog is a large, light-gray button labeled 'Add Hours'.

Here the user can add the number of additional hours the employee has worked that they have elected not to be paid for and select if they were completed in the holiday period or not. The form is

set up so that only one option can be selected, and the hours must be numerical characters. Once the Add Hours button has been clicked the hours will be added to the employee's total in the database and the hours will be multiplied by the appropriate hourly rate and this sum will be added to the overall banked salary.

Hours Banker

Select User

1 Andrew

2 Sophie

3 Kaylee

4 Richard

Employee Details

ID4

NameRichard

Rate£ 10.0 per hour

Holiday Rate£ 12.0 per hour

Banked Hours4.0

Banked Salary£ 48.0

New Employee

Add Hours

Delete Employee

Edit Employee

Remove Hours

Delete Employee

If the user selects an employee from the list and then clicks the Delete Employee button they will be prompted if they are sure they want to remove the selected employee, if they click yes the user will be deleted from the database. If they select no they will be returned to the main interface with no change.

Delete

?

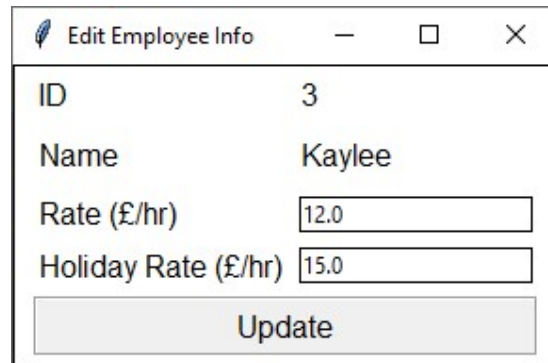
Are you user you want to delete employee 4?

Yes

No

Edit Employee

If the user wants to update the employee's hourly rates, they can do so by clicking edit employee.



A dialog box titled "Edit Employee Info" with a feather icon. It contains the following fields and values:

Field	Value
ID	3
Name	Kaylee
Rate (£/hr)	<input type="text" value="12.0"/>
Holiday Rate (£/hr)	<input type="text" value="15.0"/>

At the bottom is an "Update" button.

Here the Rate and Holiday Rate fields can be edited. They can only accept numerical characters and a decimal point. If the user clicks update the employees hourly rate will be updated, these changes will be saved to the database and displayed in the employee details on the main interface.

Remove Hours

When an employee decides they want to receive payment for their banked hours the user can click remove hours.

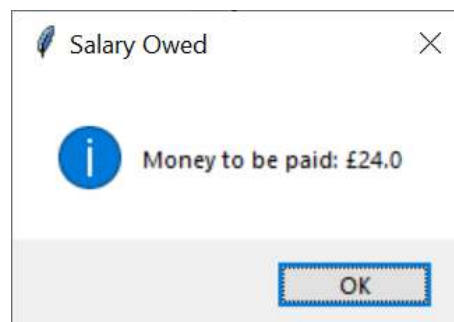


A dialog box titled "Remove Hours" with a feather icon. It contains the following field and value:

Field	Value
Hours to Remove	<input type="text"/>

At the bottom is a "Remove Hours" button.

The following dialogue box will appear. Here the user can only enter numerical characters into the field. Although the user can add Holiday or Standard hours to the bank, when hours are removed the program simply divides the banked salary by the banked hours to calculate an averaged hourly rate. This averaged rate is multiplied by the hours to be removed to calculate the sum owed to the employee. This amount is displayed in a message box and that amount of banked salary is removed from the database along with those banked hours.



A message box titled "Salary Owed" with a feather icon and a close button. It contains the following information:

i Money to be paid: £24.0

At the bottom is an "OK" button.