**AC51002 - Software Development: Course Work 1**

**Descriptions of Variables and functions**

**Variables:**

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| --- | --- |
| **Variable** | **Description** |
| BaseDirectory | Holds the path where the ‘DundeeZest\_Files’ directory is located |
| clockInTime | Parameter for ‘logIn’ function. Hold the time when the operator clocks in to resume operations for that day |
| commandInput | The inputted value from the operator to start, exit or skip. |
| currentProductionTime | A loop variable to increment the number of hours worked |
| currentOperatingHours | Used to keep track of the cumulative operating hours over time until the limit is reached for maintenance. |
| currentTime | A loop variable to keep track of the current time of the day in 24hr format |
| currentTimeFmt | A formatted copy of the content in ‘currentTime’ as a string and left justified with complementing zeros (0) |
| fileContent | Holds the content of the file being opened |
| fileName | Holds the name of the file being opened |
| fileNames | List holding the file names in a directory |
| hoursWorked | Used to keep account of the number of hours worked by the operator in that production cycle |
| itemsCatalog | Dictionary variable with the details of the products and the quantity produced per hour |
| itemNames | List of the keys in the ‘itemsCatalog’ dictionary |
| itemsPerHour | List of the values in the ‘itemsCatalog’ dictionary |
| line | A loop variable for holding each line/row in ‘openedFile’ |
| openedFile | A stream object for the file being opened |
| operatorId | Holds the ID inputted from the operator |
| operatingHours | Used to keep track of the total operating hours in writing to the file |
| operatingHoursLimit | Holds the specified limit for operating hours before the system is due for maintenance |
| previousHoursWorked | Holds the number of hours worked read from the file |
| previousTotalPerItem | Holds the number items produced for hours worked read from the file |
| previousTotalAllItems | Holds the total items produced for hours worked read from the file |
| productionDataDirectory | Holds the path where the ‘Production\_Data’ directory is located |
| totalItems | The total items produced for hours worked read from the file |
| workingHoursStart | Hold the specified starting time for operations, where the system will allow an operator to clock in |
| workingHoursStop | Hold the specified closing time for operations, where the system will close operations |

**Functions:**

* resetData

This function is called to reset all the saved operation data stored on files.

* triggerServiceMaintenance

This function initiates the events to take place once operations limit is reached and service maintenance is required.

* retrieveOperatorData

A function called to read existing operator data from file

* updateOperatorData

Performs a write to the file, updating an operator’s data stored

* retrieveOperatingHours

A function called to read existing operator hours from file

* updateOperatingHours(operatingHours, hoursWorked)

Performs a write to the file, updating the operating hours

* logIn

Initiates a simple log in process and the production process for operating hours