

21/12/2012

**0112541**  
**Programming Languages**  
**Term Project**  
**(Due 14/01/2013 )**  
**V1.0**

**Important Note:** This document might be updated to answer your FAQ, so please frequently check website for updates and check the version number of document to see if it is updated.

**SUBJECT**

You will implement a TIMETABLE (Shift) ANALYZER for a company. The system should satisfy the requests of the company. The details of the system are given below. Please read them carefully and strictly conform to these details while implementing the system.

**1. TimeTable Analyzer**

A company has several corners where different numbers of employees work. Every week, each corner reports the schedule of their workers. This timetable is saved in a CSV file. The program should read four files (since each month consists of four weeks) separately and report&save

- How many hours a worker worked
- How many times a worker has opened the corner
- How many times a worker has closed the corner
- How many times a worker has opened the corner after a closedown
- How many times a worker had a OFF day at weekends
- The workers who worked at the same time (the same start time and the same end time)
- How many times a worker had an OPENING, an OFF day and a CLOSING consecutively.

**2. System Details**

This section describes the inputs and the outputs of your implementation. You must design your implementation according to the rules mentioned in this section.

**2.1 System Parameters**

The timetable files consist of

- the name and surname of the workers

- the workerId of the workers
- the startTime and the endTime of each workers for each day in a week.
- the date

Do not forget that these files are saved in a CSV format.

## **2.2 How the program should work?**

Once the program starts, it should first ask the name of the corner, the opening time and the closing time of the corner. Afterwards, it should ask the user 4 different file names. Then, it should read each of them and interpret the data such as to obtain the information explained in Section 1.

After analyzing all the four timetables, the program should write all this obtained information into a CSV file in a formatted style.

## **2.3 An Example File**

You should also download the SHIFT.xls file from my website and save it as SHIFT.csv. Your program should work according this example file format.

## **3. TIPS AND HINTS**

This project should be partitioned into several modules and each module should be implemented separately. You should also clearly define inputs and outputs of each module.