

CNS 1400 Fundamentals of Programming

Programming Project 3: Good Guy's Delivery Service

Objective:

At the completion of this project, you will have created an application that

- Uses a Graphical User Interface to get the user's input
- uses arithmetic expressions and assignment to do its calculations, and
- formats output and sends it to a Text Box on the user interface.

Project Description:

GoodGuy's Delivery service operates a fleet of delivery vehicles that operate between Provo and Salt Lake City. With the I-15 construction work scheduled for Utah County, GoodGuys wants you to create a program for them that will compute the new arrival times for deliveries. Once the work on the interstate begins, GoodGuys estimates that their delivery times will take, on average, 25% longer than they do now. They would like a program that accepts as input a starting time and ending time for a journey, based on the old timetable. The program will then calculate the new ending time for the journey and print out the results. Your program need not worry about going across day boundaries. Times are represented in a 24 hour clock, or military time, such as 0955 (9:55am) or 1330 (1:30pm). Be careful, you **cannot** simply subtract one 24 hour clock time from another and get the correct answer. You have to convert everything into minutes first!

Your program should do the following:

1. Prompt the user to enter in a starting time in 24 hour format
2. Get the user input as a single integer
3. Prompt the user to enter in an ending time in 24 hour format
4. Get the user input as a single integer
5. Calculate the new ending time
6. Display the new ending time in 24 hour format (hhmm)

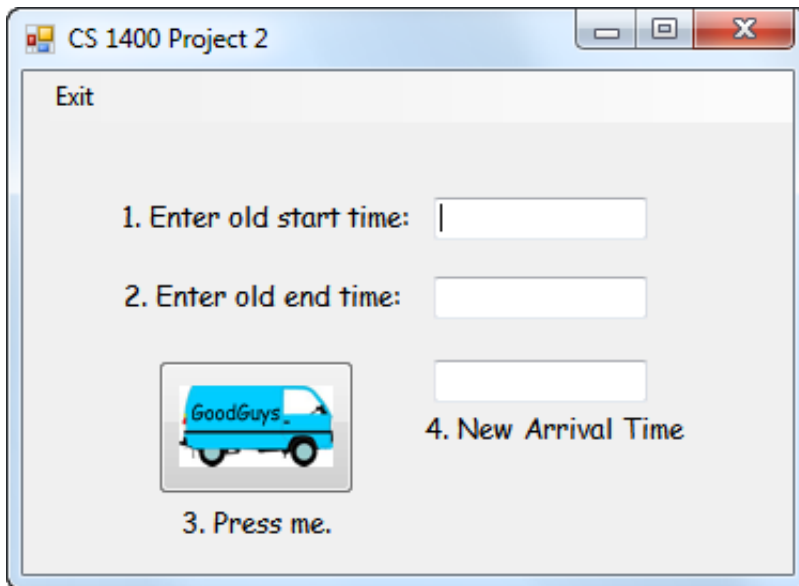
The Interface

You should design your own interface, but it should provide the following:

- A Text Box where the user can enter an old departure time.
- A Text Box where the user can enter an old arrival time.
- A Text Box where the new arrival time can be displayed.

- A Button to that will read in the old departure and arrival times, calculate the new arrival time, and display it on the interface.
- A menu strip with an Exit and About menu items.

Here is an example of a working interface.



Format and document your code in accordance with the course style guidelines. Include a file prologue identifying you as the author. Make sure that each event handler you write has a complete method prologue. Be sure that you have included your pseudo-code for the Button event handler.

Files to Submit:

Place your complete project folder into a zip file and name the zip file proj_03_your-initials_V1.0.zip. For example, I would name my file proj_03_RKD_V1.0.zip. Submit this assignment as Project #3 on Canvas.

Hints

You can find some hints for this problem [here](#).

Grading Criteria

Description	Points possible	Your points
Project meets grading guidelines: <ul style="list-style-type: none"> o Source code files contain a declaration that you did not copy any code o Project has been properly submitted to Canvas 		

<ul style="list-style-type: none"> o Code meets style guidelines o Code is properly documented o Message Box displays your name, section, and the text "Project Two" 	5	
Program allows user to input a starting time in 24 hour clock time	5	
Program allows user to input an ending time in 24 hour clock time	5	
Program correctly calculates a new ending time for this trip based on the program specification and displays the new ending time for this trip	15	
Output is formatted so that it always appears as hhmm (4 digits)	5	
Total	35	
Early Bonus (5 points) or Late Penalty (20% per day)		

You can get an executable that runs correctly [here!](#)