

CSCI 1320 HW1 C Fundamentals
(Due at the beginning of the class on Monday, Feb. 11)

Directions: We are going on a trip. Let's complete a program called `travel.c` that will help us estimate the time of arrival at our destination. The program reads in the distance to be traveled, the speed at which we will travel, and the departure time. It will calculate the amount of time the trip will take and give us our estimate arrival time. Each time is in the form `hh:mm`. **MATCH** the following output:

```
Distance to be traveled (miles): 615.3
Speed of travel (mph): 58.6
Departure (military) time (hh:mm): 15:45
```

```
Distance: 615.30 miles.
Speed: 58.60 mph.
Departure time: 15:45.
Travel time: 10:30.
Arrival time: 2:15.
```

The initial version of `travel.c` is provided on next page (download it online and finish it).
Note:

- The initial version of `travel.c` defines all variables you need. Do NOT introduce any new variable to your program.
- Do NOT use any conditional statement, such as `if`, in your program. Use arithmetic operators to implement your algorithm where `if` is involved.

The initial version of `travel.c` demonstrates a **complete, well-written** and **well-documented** program by doing the following things:

- Put a **COMMENT** at the head of the program to give the purpose of the program. Use comments elsewhere in the program where they help make it more understandable.
- Use **MNEMONIC VARIABLE NAMES** – `distance`, for example, is much more descriptive than `x`.
- Use **WHITE SPACE** freely to make the structure of the program apparent.

```

/*****
/* This program reads in the distance to be covered on a
/* trip, our average speed, and our departure time.
/* It calculates and prints our travel time and estimated
/* arrival time.
*****/

#include <stdio.h>

//define constants

int main(void)
{
    int depart_hours, depart_mins, hours, mins, arrival_hours,
        arrival_mins;
    float distance, speed, travel_time;

    /*****
    /* Read in the distance, speed, and departure time.
    /* Departure time is in the form hh:mm.
    *****/

    /*****
    /* Calculate travel time and arrival time.
    *****/

    travel_time = distance / speed;

    //break down travel time to hours and minutes

    //calculate arrival minutes and arrival hours

    /*****
    /* Print results.
    *****/

    return 0;
}

```