

## Computer Science I: Lab 2

due Wednesday, February 24, 11:59pm

This lab is our introduction to conditional statements.

We will write a small program for Fordham Airlines to allow the customer to purchase flights, calculating how much the customer owes, taking payment, and calculating change.

The airline sells tickets for travel during two time periods: daytime (departing 5am-7pm) and nighttime (departing 7pm-5am).

The airline sells tickets for three destinations: Chicago, Miami, and Portland.

The airline sells tickets for two types of days: weekday and weekend (you could use 'D' for weekday and 'E' for weekend).

### Pricing information:

For Miami travel, flight prices are as follows:

For weekday travel: \$150 during the daytime, \$100 during the nighttime

For weekend travel: \$180 during the daytime, \$120 during the nighttime

Chicago flights cost half the price of Miami flights, and Portland flights cost twice as much as Miami flights. For example, a Portland weekday flight during the nighttime is \$200. A Chicago weekend flight during the daytime is \$90.

Your program is to work as follows:

1. Display a welcome message (e.g., "Welcome to Fordham Airlines!")
2. Prompt the user to input his/her destination: Chicago, Miami, or Portland (I recommend you use letters to represent each input)
3. Prompt the user to input what time s/he wishes to travel (in army time, e.g., 800 for 8am or 1530 for 3:30pm)
4. Prompt the user to input what type of day (s) s/he is traveling: Weekday or Weekend (I recommend you use letters to represent each input)
5. Report the price per ticket of the specified type
6. Prompt the user for the number of tickets to be purchased
  - If the number of tickets is fewer than 0, report that the number of tickets ordered is invalid and the order has been cancelled, then exit; otherwise:
7. Compute and display the total amount due (no sales tax this time!)
8. Prompt the user to enter the amount s/he is paying
  - If the amount paid is less than the amount due, report that the amount paid is too little and the order has been cancelled, then exit; otherwise:
9. Display change and confirm the order has been placed

Two example executions of the ticket program are given at the end of this document.

For this lab you must use:

- At least one `if-else` statement
- At least one `switch` statement
- At least one constant variable (for example: `const int a=42;`)
- Good coding style (comments, spacing, good variable names) --- it counts for 30% of your grade!

I recommend you look over the programming advice I have placed on our lab website as well, to help as you write and debug. As you write your program, it is wise to make sure you can make a program that performs the first 4 steps before you work on step 5, that you can make a program that performs the first 5 steps before you work on step 6 and so on.

### Submitting your file:

Submit the final C++ code as `fordhamAir.cpp` using `submit1600` (and verify proper submission using `verify1600`).

### Example execution:

```
> ./fordhamAir.out
Welcome to Fordham Airlines
What is your destination? ([C]hicago, [M]iami, or [P]ortland) P
What time will travel? (Enter time between 0-2359) 450
What type of day are you traveling? (week[E]nd or week[D]ay) E
Each ticket will cost: $240.00
How many tickets do you want? 2
You owe $480.00
How much will you pay? 100.00
That is too little! No tickets ordered.
```

### Another example execution

```
> ./fordhamAir.out
Welcome to Fordham Airlines
What is your destination? ([C]hicago, [M]iami, or [P]ortland) M
What time will travel? (Enter time between 0-2359) 1345
What type of day are you traveling? (week[E]nd or week[D]ay) D
Each ticket will cost: $150.00
How many tickets do you want? 3
You owe $450.00
How much will you pay? 500.00
You will get $50.00 in change.
Your tickets have been ordered!
```