# How to run the program

Part a:

The program can be run by running ConstructHouse class which has a main method. You can either import the assessment folder into an IDE (recommended for checking the source) or you can use a command line interface on windows to run the class file. Note that you will need to use the classpath option when running in this method. For example:

C:\ > java -classpath C:\Javafiles\project1\bin ConstructHouse

Part b:

The program can be run by running TravelConsole which has a main method. You can either import the assessment folder into an IDE (recommended for checking the source) or you can use a command line interface on windows to run the class file. Note that you will need to use the classpath option when running in this method. For example:

C:\ > java -classpath C:\Javafiles\project1\bin TravelConsole

# Description of the programs

Part a:

This program constructs an object ‘House’ and prompts users for various attributes for that house. It will ask for things like number of rooms and if it has a yard. It will also ask for a number of x and y coordinates. This is put into an array and passed into two methods which calculate the perimeter and area. The x and y points are numbered clockwise around a polynomial. So x1, y1 are the top left, x2, y2 are the top right etc.

After the user has input some values the program will output the area, perimeter and cost of the house.

Classes:

House , ConstructHouse(main)

Part b:

This program simulates a simplified travel agency system. It allows a user (the travel agent) to specify flights, add customers, add movies, perform bookings and more. The program is comprised of TravelAgent, TravelConsole, Flight (superclass), BusinessFlight (subclass), EconomyFlight(subclass) and Movie classes. TravelAgent is desiged to hold a list of these objects except for movies which is part of a flight. TravelConsole is a class that is comprised of menus and asks for user input to do things like maintain lists and perform bookings. The objects themselves are stored in an ArrayList data structure. TravelConsole has a lot of loops to search lists to match user input.

Classes:

Flight (BusinessFlight, EconomyFlight), Movie, Customer, TravelConsole, TravelAgent

# Test output run

## Part a

Please enter the number of bedrooms your house will have: 3

Please enter the number of bathrooms your house will have: 1

Will this house have a yard? (y/n): y

What material will the roof be made out of?: Steel

Please enter in coord x position number 1: 4

Please enter in coord y position number 1: 10

Please enter in coord x position number 2: 9

Please enter in coord y position number 2: 7

Please enter in coord x position number 3: 11

Please enter in coord y position number 3: 2

Please enter in coord x position number 4: 2

Please enter in coord y position number 4: 2

The total area is: 45.5sqm

The total perimeter is: 28.462327953215123

The total for this quote is : $2045000.0

## Part b

Please enter travel agent name to begin... >>: Travel World Inc.

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 1

---- Travel Console - Travel World Inc. - Add Menu ----

1) Add a new customer

2) Add a new flight

3) Add a new movie

4) Return to main menu

>>:

1

---- Add Customer ----

Please enter in customer name >>:

John Smith

Please enter the number of child seats >>: 1

Please enter the number of adult seats >>: 2

Added customer John Smith to list. Return to menu...

---- Travel Console - Travel World Inc. - Add Menu ----

1) Add a new customer

2) Add a new flight

3) Add a new movie

4) Return to main menu

>>:

2

---- Add Flight ----

1) Add a Business Flight

2) Add a Economy Flight

>>:1

Please enter in the flight's origin >>: Tasmania

Please enter in the flight's destination >>: Bali

Please enter in the date in dd/mm/yyyy format >>: 11/12/2012

Please enter in etd: (eg: 930 for 9:30 AM >>: 515

Please enter in eta: (eg: 1700 for 5:00 PM >>: 2200

Please enter in the base price for this flight >>: 1500

Please enter in the concession rate (eg: 0.50 for 50%) >>: 0.20

Added flight number 3 to system

---- Travel Console - Travel World Inc. - Add Menu ----

1) Add a new customer

2) Add a new flight

3) Add a new movie

4) Return to main menu

>>:

2

---- Add Flight ----

1) Add a Business Flight

2) Add a Economy Flight

>>:2

Please enter in the flight's origin >>: Albury

Please enter in the flight's destination >>: Sydney

Please enter in the date in dd/mm/yyyy format >>: 05/05/2012

Please enter in etd: (eg: 930 for 9:30 AM >>: 1300

Please enter in eta: (eg: 1700 for 5:00 PM >>: 1515

Please enter in the base price for this flight >>: 299

Please enter in the concession rate (eg: 0.50 for 50%) >>: 0.10

Added flight number 4 to system

---- Travel Console - Travel World Inc. - Add Menu ----

1) Add a new customer

2) Add a new flight

3) Add a new movie

4) Return to main menu

>>:

3

Plese enter in movie name: No Country for Old Men

Please enter in movie running time in minutes: 122

Please enter in the flight ID to add this movie to the flight : 3

Added to Business Flight 3

---- Travel Console - Travel World Inc. - Add Menu ----

1) Add a new customer

2) Add a new flight

3) Add a new movie

4) Return to main menu

>>:

4

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 2

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 1

Listing customers...

ID: Name: Child Seats: Adult Seats: Cost:

1 Alec Carey 3 2 0.0

2 Mr Bean 1 0 0.0

3 John Smith 1 2 0.0

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 2

Listing flights:

1 Australia New Zealand 940 1050 1500.0 0.5 Business Flight

3 Tasmania Bali 515 2200 1500.0 0.2 Business Flight

2 Australia USA 630 2250 8500.0 0.4 Economy Flight

4 Albury Sydney 1300 1515 299.0 0.1 Economy Flight

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 3

Listing movies...

Flight Id Name Run Length

1 Superman 5 130

3 No Country for Old Men 122

2 The Matrix 145

4

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 4

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 4

---- Travel Console - Travel World Inc. - Booking Menu ----

1) Book a customer to a flight

2) Return to main menu

>>: 1

Please enter in a customer ID >>: 2

Customer chosen:

2 Mr Bean 1 0 0.0

2) Please choose a flight ID >>:3

Flight chosen:

3 Tasmania Bali 515 2200 1500.0 0.2 Business Flight

Is this correct? (y to book!) >>:y

Booked!!

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 2

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 1

Listing customers...

ID: Name: Child Seats: Adult Seats: Cost:

1 Alec Carey 3 2 0.0

2 Mr Bean 1 0 930.0000000000001

3 John Smith 1 2 0.0

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 4

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 3

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 1

Please enter in customer ID to delete: >>: 2

No record found.

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 1

Please enter in customer ID to delete: >>: 2

No record found.

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 1

Please enter in customer ID to delete: >>: 1

Record found!

1 Alec Carey 3 2 0.0

Do you wish to delete? y for yes: >>: y

Deleted...

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 2

Please enter in Flight number to delete >>: 2

Records Found!

2 Australia USA

This flight has 1 movies. Do you wish to delete? y for yes: >>:

y

Deleted...

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 3

Please enter in the name of the Movie to delete >>: 2

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 3

Please enter in the name of the Movie to delete >>: No country for old men

No Country for Old Men 122

Do you wish to delete? y for yes:>> y

Deleted...

---- Travel Console - Travel World Inc. - Delete Menu ----

1) Delete customers

2) Delete flights

3) Delete movies

4) Return to main menu

>>: 4

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 2

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 1

Listing customers...

ID: Name: Child Seats: Adult Seats: Cost:

2 Mr Bean 1 0 930.0000000000001

3 John Smith 1 2 0.0

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 2

Listing flights:

1 Australia New Zealand 940 1050 1500.0 0.5 Business Flight

3 Tasmania Bali 515 2200 1500.0 0.2 Business Flight

4 Albury Sydney 1300 1515 299.0 0.1 Economy Flight

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 3

Listing movies...

Flight Id Name Run Length

1 Superman 5 130

3 4

---- Travel Console - Travel World Inc. - List Menu ----

1) List customers

2) List flights

3) List movies

4) Return to main menu

>>: 4

---- Travel Console - Travel World Inc. - Main Menu ----

1) Add a new customer/flight/movie

2) List a customer/flight/movie

3) Delete a customer/flight/movie

4) Book a flight for a customer

5) Quit

>>: 5