

Component Name and Code:	Programming & Design Principles (5N2927)	Teacher:	Ray O'Connor
Assessment:	Skills Demo 2	Course(s):	SD
Weighting/Marks:	40%	Issue Date: 6-4-2016	Deadline: 25-4-2016

Guidelines/Instructions to Candidates:

You have 10 hours to complete the following skills demo in class

This skills demo requires each student to work as part of a team of 3 to 5 classmates to develop an algorithm using flow chart or pseudo code to produce a program for the scenario below. Each team must plan, design and develop a software solution, clearly detailing the role and work carried out by each team member. Github may be used so all team members can work on the program. The software solution that must be designed and tested is for a company who rents 2 different types of holiday homes in West Cork. The software must allow a customer to make a booking by providing the following details: customer name, mobile, email, credit card number, expiry month and year, week number, house number and any extras which may be booked. Each teams finished program must comply with the following

- All bookings are for one week only (eg week 1 to week 52)
- A house can only be booked once for any of the 52 weeks (eg once house 1 is booked for week 1 it cannot be booked again)
- 3 three-bed houses numbered 1 to 3 cost €350 per week, 3 four-bed detached houses numbered 4 to 6 cost €400 per week
- Additional extras are available with costs as follows (iron – add €10, satellite TV – add €10, barbecue – €15)
- The company must be able to check bookings on a separate screen (eg outlining Houses booked TRUE or FALSE)
- The total cost of all bookings must be available to allow the company view revenue at any time
- Calculate the average cost for three and four bed houses

Solutions must include the following:

- Sub procedures/modules/multiple forms
- A function(s) for calculating the cost of each booking and average cost of bookings and total cost of all bookings
- To prevent your software from crashing you must employ effective error handling code (eg Try...Catch...)

Required

- Develop a top down algorithm using pseudocode or flowchart(s) to solve the given problem.
- A complete data dictionary (eg variables names including data types).
- Your program must incorporate Selection statement(s) and Boolean operator(s)
- Test data must be provided with screenshots of each working stage of program confirming results for the test data.
- Source code must be commented and indented with suitable names used for all variables and objects.

Assessment: **Note:** You must staple this cover sheet in front of the printouts below (2 staples top left corner)

You must present the following in class to your teacher on or before deadline

- printout of algorithm developed using pseudo code or flowchart, test data and all source code
- printout of screenshots demonstrating each working stage of the program and for different test data
- **IMPORTANT:** Project folder containing all electronic files on USB which must be copied onto teachers folder on server

DECLARATION: I _____, confirm that everything I submitted for assessment is my own original work.

Signed: _____

Date: _____