

PRCO304: The Project Initiation Document (PID)

1. Introduction

Towards the end of a students first year of study, most students are expected to find their own accommodation for the years to come. This can be a difficult task when students are expected to find both potential housemates and suitable accommodation while simultaneously dealing with the stress of their studies and their first year away from home.

The process of finding housemates and appropriate accommodation can be hard for many students who may be direct entrants, foreign exchange or simply introverted students who have been unable to find housemates throughout their first year of study.

The current method of approach causes unneeded stress in a students life and can also be very time consuming. This aim of this project is to develop an application that could simplify this process, allowing isolated students to both find potential housemates and accommodation with ease.

2. Business Case

2.1 Business Need

Currently, when a student wishes to find accommodation they must either go to an estate agent in person, or visit an estate agent website. Both of these methods expect the student to already have found housemates to live with, and collaboratively find housing with them. Many students may find it hard to find housemates themselves due to ineffective social skills, being foreign exchange students, or direct entrants.

There are websites such as sparerroom.co.uk and houseshare.com that allow people to find single rooms to rent in Plymouth, but specialise in single rooms with pre-existing housemates. The issue with these websites is that they do not list individual rooms in empty properties, and therefore do not take advantage of the yearly rotation of student accommodation. Most of the houses that advertise on these websites either appear mid-year when students drop out, or are single rooms in family houses. For these reasons there is currently no effective, student-based solution to this problem.

The current methods are inefficient due to accommodation websites not listing single rooms in currently unoccupied student accommodations that are available for the beginning of the academic year. As well as estate agents being inefficient at grouping together potential student housemates.

2.2 Business Objectives

To allow students to find accommodation in a way that

- (a) doesn't require predefined housemates
- (b) effectively groups together students
- (c) is not time consuming
- (d) doesn't require extensive interpersonal skills
- (e) takes into account the individual needs of the student

3. Project objectives

1. To analyse potential development technologies and deployment solutions
2. To analyse student-focused user requirements
3. To identify issues with current student accommodation search methods
4. To implement a solution that rectifies the issues with previous methods
5. To implement a solution that is intuitive and user non-time-consuming

4. Initial scope

1. Shortcomings of current systems will be identified by interviewing students, and observing current estate agent website functionality.
2. The proposed system will allow
 - a) users to view and rate available accommodation online
 - b) administrators to add new accommodation to the system
 - c) users to find housemates who like the same accommodation
 - d) users to view contact information of matched housemates and landlords
 - e) users to enter and amend their contact details
3. Further user requirements will be identified by interviewing current and past students, observing current estate agent websites, and developing corresponding user stories. Use requirements will be primarily expressed through text.
4. The more complex user requirements will be elaborated into detailed system requirements either using text, use case descriptions and/or a use case realisation. A class diagram will be produced. State machines may be developed for those classes with significant state dependent behaviour.

5. Method of approach

The software development process will be primarily incremental. This development model has been chosen due to the solid requirements of the project as well as the ability to have a working (but perhaps non-complete) application early on, this way if the complete system is not complete before the delivery date then there is still something to show to satisfy some demands of the PRCO304 module.

The increments will focus on (i) backend database & relationships; (ii) functioning front end and database queries; (iii) Front end visual development & HCI.

Possible technologies are JSP, PHP/MySQL or ASP.NET, although full evaluation will take place during the project.

6. Project plan			
Stage	Expected start Date	Expected Completion Date	Products/Deliverables/Outcomes
1. Initiation		Jan 25th	PiD
2. Investigation and requirements identification	1 Feb	9 Feb	Requirements Document; Evaluation of development technologies; Use cases;
3. High level design	10 Feb	16 Feb	Design documents (Architecture; DB schema; modular decomposition; GUI style guide; ...)
4. Increment 1	17 Feb	24 Feb	Database & relationships
5. Increment 2	25 Feb	16 March	functioning front end and database queries
6. Increment 3	17 March	28 March	Front end user interface incorporating HCI designs
7. User testing & Fixing	1 April	21 April	Final System
8. Assemble & complete final report	22 April	6 may	Final Report

6.1 Control plan

The following PRINCE2 control techniques will be employed:

- Highlight reports weekly until Easter and at the end of each stage thereafter.
- Weekly review meetings with project supervisor until Easter and as needed there-after, to review progress, plans and products.
- Risk management (see Section 7)
- Communication plan (see Section 6.2)
- Quality plan (see section 8)
- Exception reports (see Section 6.2)

6.2 Communication plan

Review meetings will be held with the supervisor in line with the Control plan. Further ad-hoc communications may take place as needed.

7. Initial risk list	
Risk	Management Strategy
Schedule overrun	The project plan has been generous with the interactions with more risk, and the iterations have been planned in a way that a functioning application will be available before iteration 3 has started. Contingency time has also been included in the plan.
Difficulty learning/using the development technologies.	During investigation and requirements phase the technology chosen will take into account previous experience with the technologies.
Requirements breakdown	Detailed requirements will be planned before development and frozen upon starting the corresponding iteration.
Technology failure	Backups will be taken daily and standard technologies will be used
Gold plating	The outlined requirements will take priority and any extra functionality will only be added if time permits
Technology doesn't fit government regulation	No real personal data will be used during testing and development, research will be undertaken during planning.
System outages	Development applications will be installed and running on two separate PCs (Laptop & Computer) with university computers available as backup.

8. Initial quality plan	
Quality Check	Strategy
Requirements	Requirements will be checked (within Stage 2) to ensure that they are correct, relevant, complete and achievable. The requirements document will also detail required product quality criteria (e.g., usability). Prototyping, user interviews and walkthrough will be employed.
Design validation	The design will be checked (within Stage 3) against requirements compliance, HCI guideline compliance,, DB normalisation and software design principles
Backend V&V	Will be conducted at the end of each increment
Front end V&V	Will be conducted during Testing & Fixing stage (Stage 7)