**Functional Requirements Document**

**Template**

**Team Number: 4**

**Team Name: The Naughty Toads**

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| 0.1 | Created |  | 3/30/2019 |
| 0.2 | Modified functional requirements and finished up document. |  | 4/2/2019 |
| 0.3 | Touched up on functional requirements |  | 4/4/2019 |
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# INTRODUCTION

This database will function as a way to manage apartments overseen by the Southern Utah University Housing Department. The database will keep track of which students are staying in which rooms and will keep track of any expenses made in each of the rooms.

## Purpose

The main purpose of the database is to be able to group tenants into rooms with others of similar interests and demographics to create the best possible living environment.

## Scope

The document will accomplish its purpose by taking the information provided in the survey and using it to group students with similar interests.

## Background

Southern Utah University Housing department offers low cost housing to current students at SUU. We are producing this document to demonstrate our goals for the database that we are creating for the SUU housing department.

## References

“University Housing.” *SUU*, [www.suu.edu/housing/](http://www.suu.edu/housing/).

Ralphs, Christopher. “University Housing Application Database.”

### Assumptions

* It is assumed that each rental agreement will last no longer than two trimesters.
* It is assumed that a meal plan can be made through a rental agreement.

### Constraints

* Only a certain amount of students can live in each apartment
* Only a certain amount of students can live in each room
* Some buildings require students to have a meal plan
* If an apartment or room is full then the student cannot stay in that room
* Each room can only be occupied by all male or all female students

## Document Overview

The document will be organized by BUILDING, MAINTENANCE, ROOM, SURVEY, STUDENT, RENTAL AGREEMENT, RENTAL APPLICATION, and MEAL PLAN.

# METHODOLOGY

After speaking to the customer we created a list of all the things that would need to be included in the database. From there we created a list of all the attributes of all the things that would need to be included in the database, we also made a list of how all the items included in the database are connected. We will now create the actual database and populate the information there.

# FUNCTIONAL REQUIREMENTS

## User Requirements

Be useful for the housing director and housing authorities to look up how far students are in the application process, see what room the student was assigned, if the student has a meal plan, keep track of the maintenance of each room, etc.

## Functional Requirements

* Each building has many rooms. Each room is in a single building.
* A room can have many rental agreements. A rental agreement is for one room.
* A maintenance can be required for many rooms. A room can require many maintenance.
* A student can take many surveys. A survey can be taken by many students.
* A survey is for one calendar year. A calendar year has many surveys.
* A student must submit one rental application every calendar year. A rental application can be submitted by one student.
* A student can have many rental agreements, but only one per calendar year. A rental agreement belongs to one student.
* A rental application may lead to a rental agreement. A rental agreement can only be made after an application is complete.
* A rental agreement can include one meal plan. A meal plan can be made through one rental agreement.

**Entities and attributes**

* BUILDING
  + BUILDING\_ID
  + BUILDING\_NAME
  + MALE\_ROOMS
  + FEMALE\_ROOMS
  + TOTAL\_ROOMS
  + AVAILABLE\_FEMALE\_ROOMS
  + AVAILABLE\_MALE\_ROOMS
  + TOTAL\_AVAILABLE\_ROOMS
* ROOM
  + APARTMENT\_NUM
  + ROOM\_NUM
  + BUILDING\_ID
* MAINTENANCE
  + MAINTENANCE\_ID
  + MAINTENANCE\_TYPE
* SURVEY QUESTIONS
  + A. Building Selection: Eccles Living Learning Center, Cedar Hall,

Ponderosa Terrace, Founders Hall

* + B. Which meal plan would you like to request? 10 meals/week, 12

meals/week, 15 meals/week, 19 meals/week, no meal plan

* + C. I am a smoker: yes, no
  + D. Do you have a roommate request: yes - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

no

* + E. I am a gamer: occasionally, non-gamer, gamer
  + F. First time living independently: yes, no
  + G. I would describe myself as: very reserved, fairly reserved, social, very

social

* + H. I would describe my room as: very neat & tidy, neat but not meticulous,

kind of a mess

* + I. Regarding my apartment– I want the apartment to be: a quiet place, I

won’t mind people around sometimes, I want people to be around, I want

our apartment to be a place where everyone hangs out

* + J. I consider myself: a night owl, an early bird
  + K. I would classify myself as: conservative, slightly conservative, slightly

liberal, very liberal

* + L. I plan on playing intramural sports: yes, no
* SURVEY ANSWERS
  + QA\_ANSWER
  + QB\_ANSWER
  + QC\_ANSWER
  + QD\_ANSWER
  + QE\_ANSWER
  + QF\_ANSWER
  + QG\_ANSWER
  + QH\_ANSWER
  + QI\_ANSWER
  + QJ\_ANSWER
  + QK\_ANSWER
  + QL\_ANSWER
* STUDENT
  + STUDENT\_ID
  + FNAME
  + LNAME
  + MI
  + TNUM
  + BDATE
  + GRADE
  + GENDER
  + PHONE
  + EM\_PHONE
* RENTAL AGREEMENT
  + RENTAL\_ID
  + START\_DATE
  + END\_DATE
  + MEAL\_PLAN (OPTIONAL)
  + STUDENT\_ID
  + CALENDAR\_YEAR
* RENTAL APPLICATION
  + APPLICATION\_ID
  + SURVEY\_ID
  + STUDENT\_ID
* MEAL PLAN
  + MEAL\_ID
* CALENDAR\_YEAR
  + CALENDAR\_YEAR

## Hardware/Software Requirements

We will be using MySQL workbench to create the database.

# Appendices

Ponderosa Terrace Housing Documentation:

<https://drive.google.com/open?id=1cZ7y14w_G3MlWMFBvfGb-PXCccEXIje0>

Cedar Hall Housing Documentation:

<https://drive.google.com/open?id=1UalLgc1os-O7Jrx8KlPnpch7v-6AOwmK>

Founders Hall Housing Documentation:

<https://drive.google.com/open?id=1UEnhdcownsfg9NJbu9UtLyPsO4HVa_LA>

Eccles Living and Learning Center Housing Documentation:

<https://drive.google.com/open?id=1MyO6RcDa3dy-zQ7r2Nf95gC-EeOqMTfs>

Customer Interview Documentation:

<https://drive.google.com/open?id=1S5ZfFI-PZpFai5ST5JUq9byBB6itNkYM>

University Housing Documentation:

<https://drive.google.com/open?id=1uQHjqu9bbuGGZDsnZTKfb0qn71b5RgoY>