DEPARTMENT OF
COMPUTER SCIENCE
計算機科學系

GIT AND PROJECT MILESTONE 1

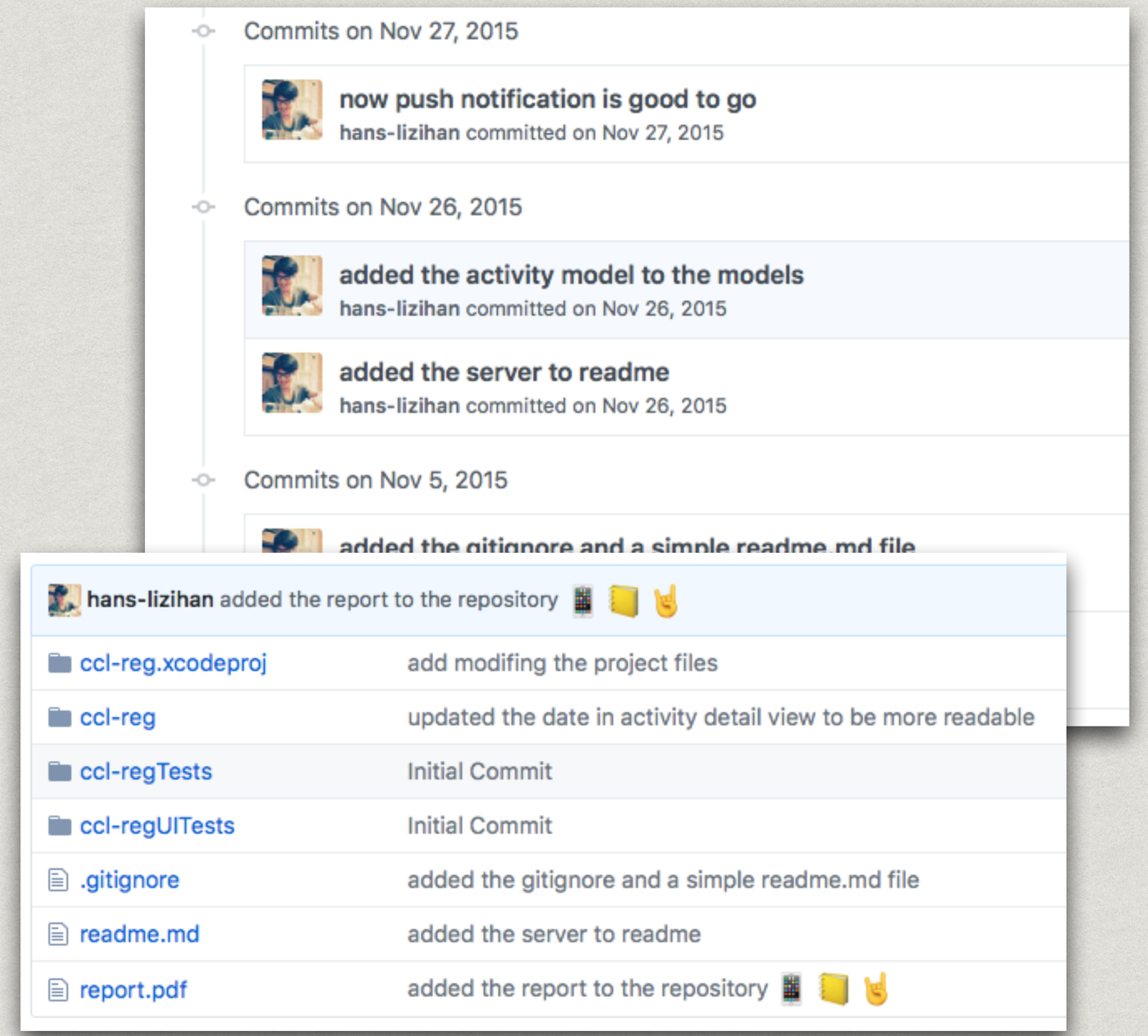
COMP3047 - SOFTWARE ENGINEERING

CHAPTER 5 - 2019 - HKBU

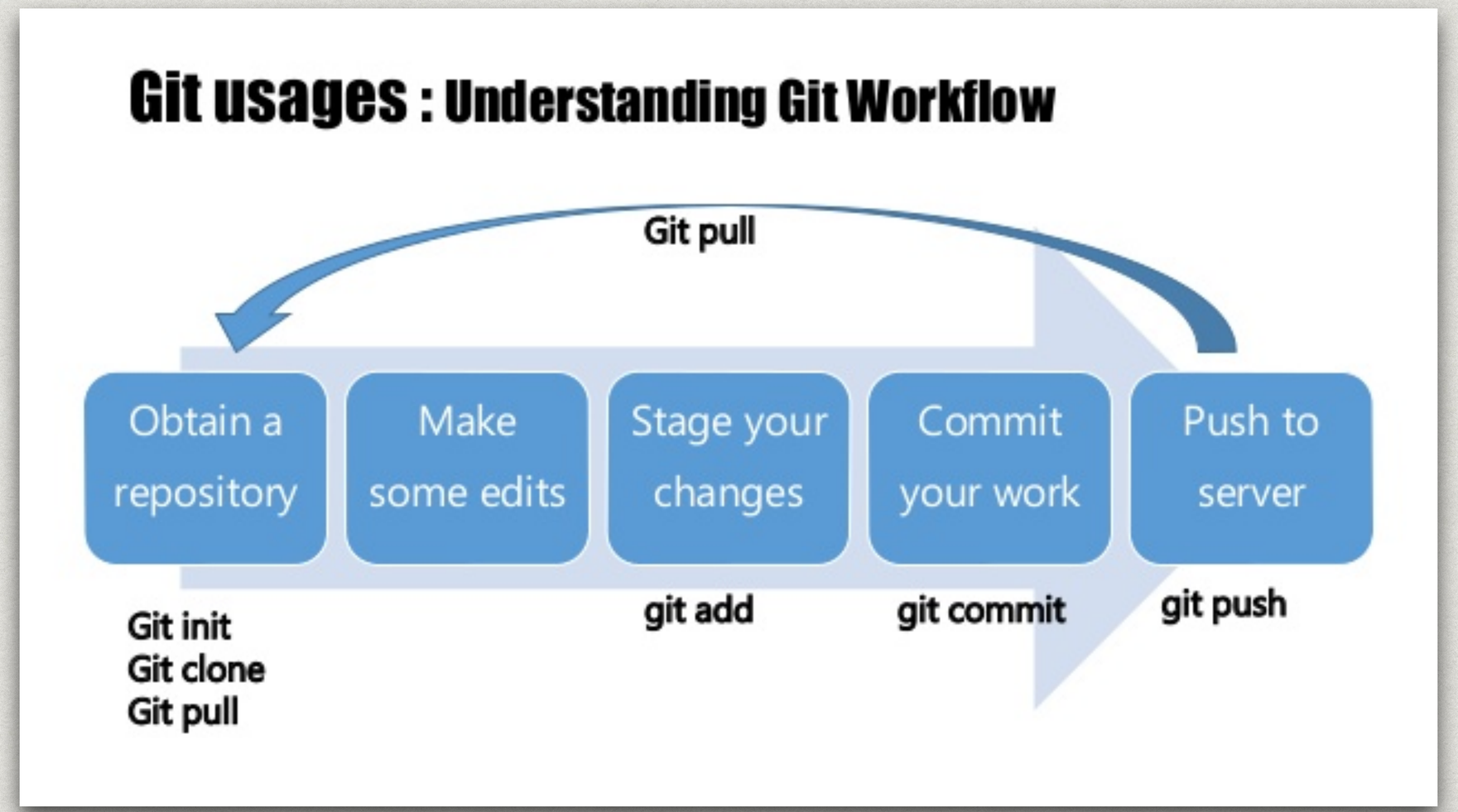
DR. MARTIN CHOY

Git and GitHub

- **Git** is a **version control system**, a tool to manage the source **code history**.
- **GitHub** is a **hosting service** for Git repositories.



Git Workflow



Git Commands

- git **init**: Create an **empty Git repository** or reinitialize an existing one
- git **add**: Add **a change** to the **staging area**.
- git **commit**: Record **changes** to the repository, using together with a **commit message**.
- git **push**: Update **remote repository** with local changes.

Commit Messages

- A **well-crafted Git commit message** is the **best way to communicate context** about a change to fellow developers.
- Examples:
  - **Refactor** subsystem X for readability
  - **Update** getting started documentation
  - **Remove** deprecated methods
  - **Release** version 1.0.0

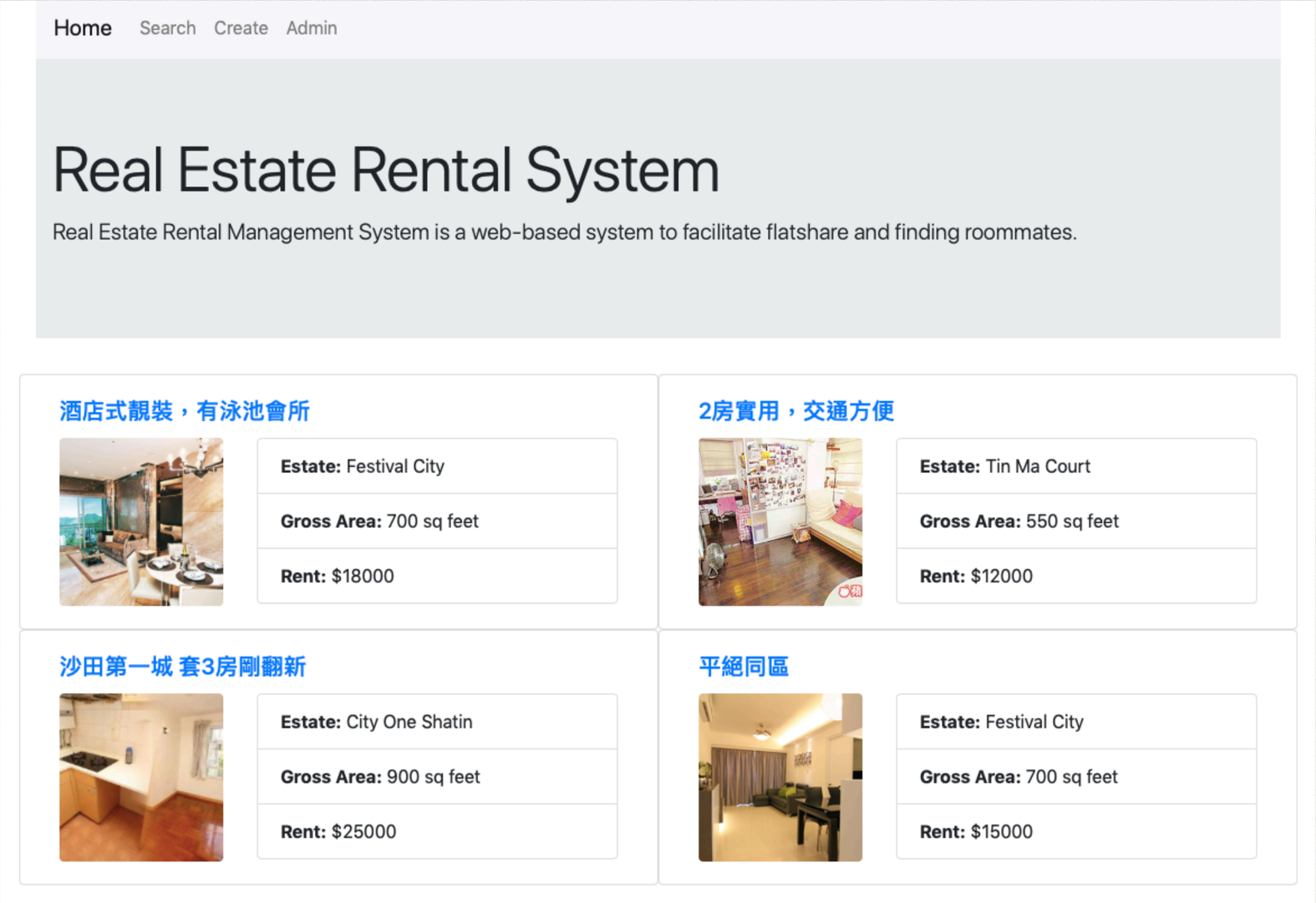
1. Capitalize the subject line
2. Do not end the subject line with a period
3. Use the imperative mood in the subject line

https://chris.beams.io/posts/git-commit/

PROJECT MILESTONE 1

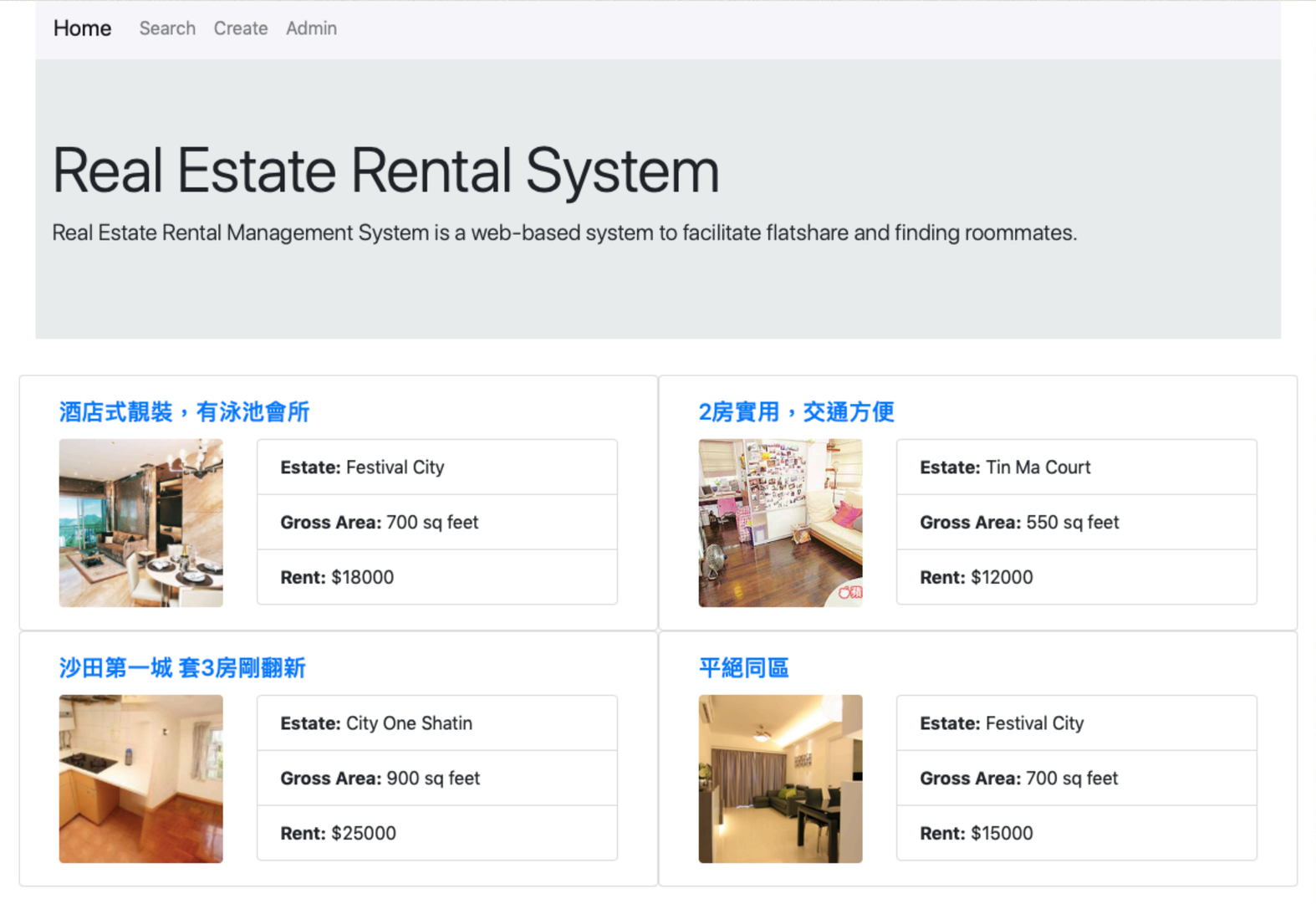
Real Estate Rental System

- Bootstrap elements
  - Navbar
  - Jumbotron
  - Panel
  - Image
  - Unordered list



First Page

- Only display **highlighted** items.
- Display the latest (based on created time) **4 items**.



Details

沙田第一城 套3房剛翻新

Estate: City One Shatin

Gross Area: 900 sq feet

Rent: $25000

Badrooms: 3

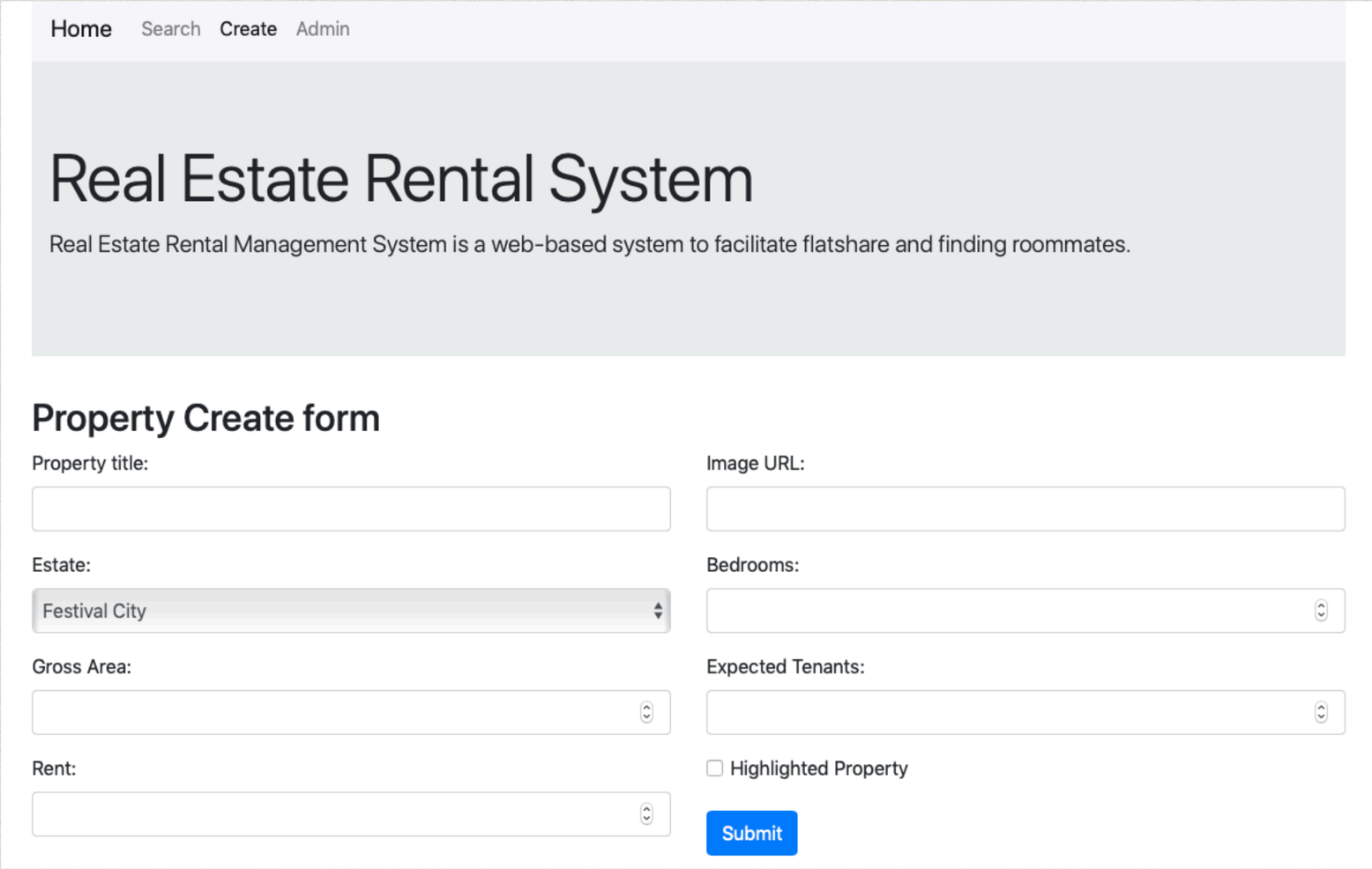
Expected Tenants: 5

Created: 9/27/2019

Updated: 9/27/2019

Create

- A **checkbox** to indicate **highlighted** estate property.



Admin Page

Home Search Create Admin

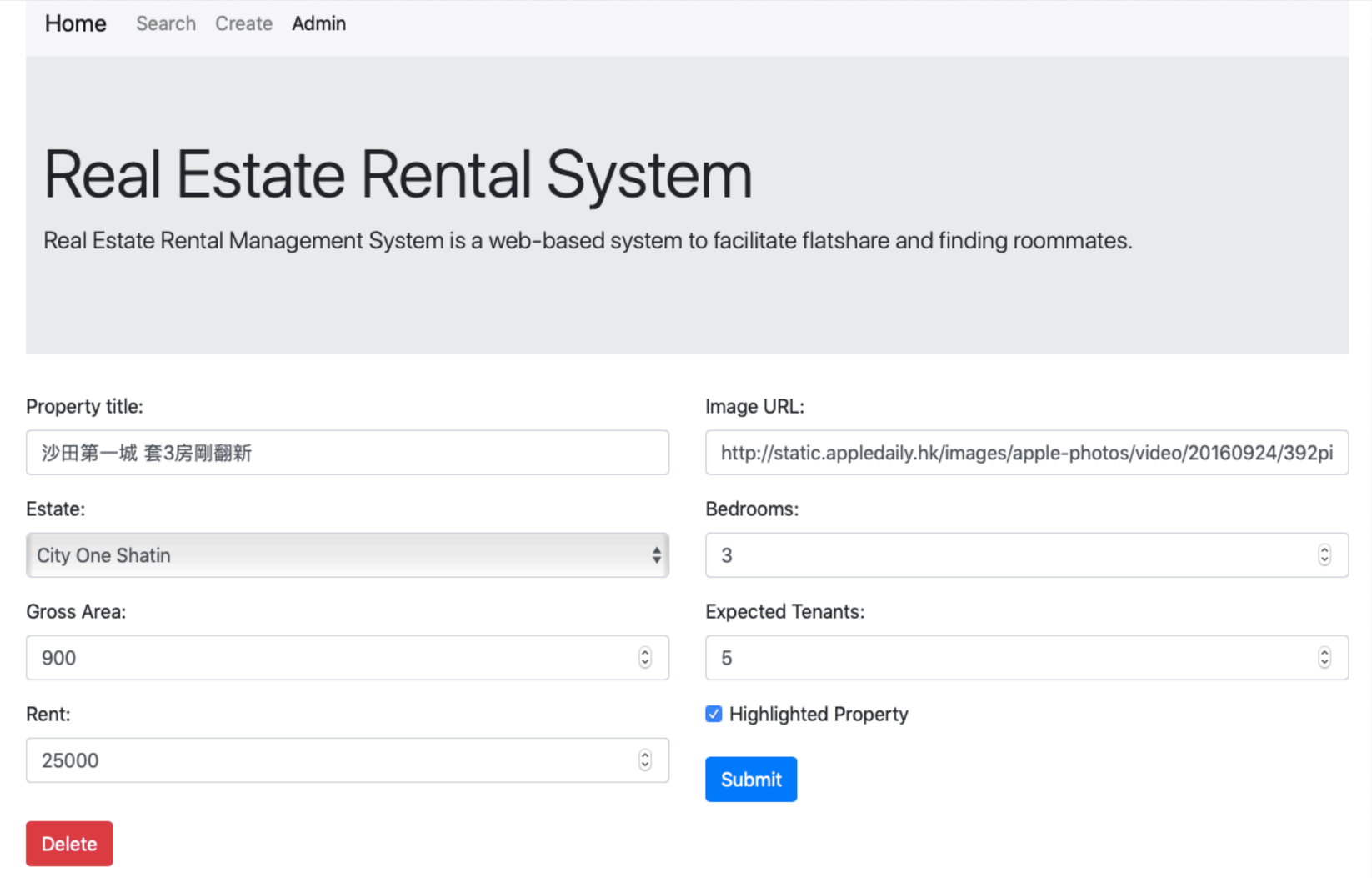
Real Estate Rental System

Real Estate Rental Management System is a web-based system to facilitate flatshare and finding roommates.

1	酒店式靚裝，有泳池會所	Festival City	Edit
2	2房實用，交通方便	Tin Ma Court	Edit
3	沙田第一城 套3房剛翻新	City One Shatin	Edit
4	平絕同區	Festival City	Edit

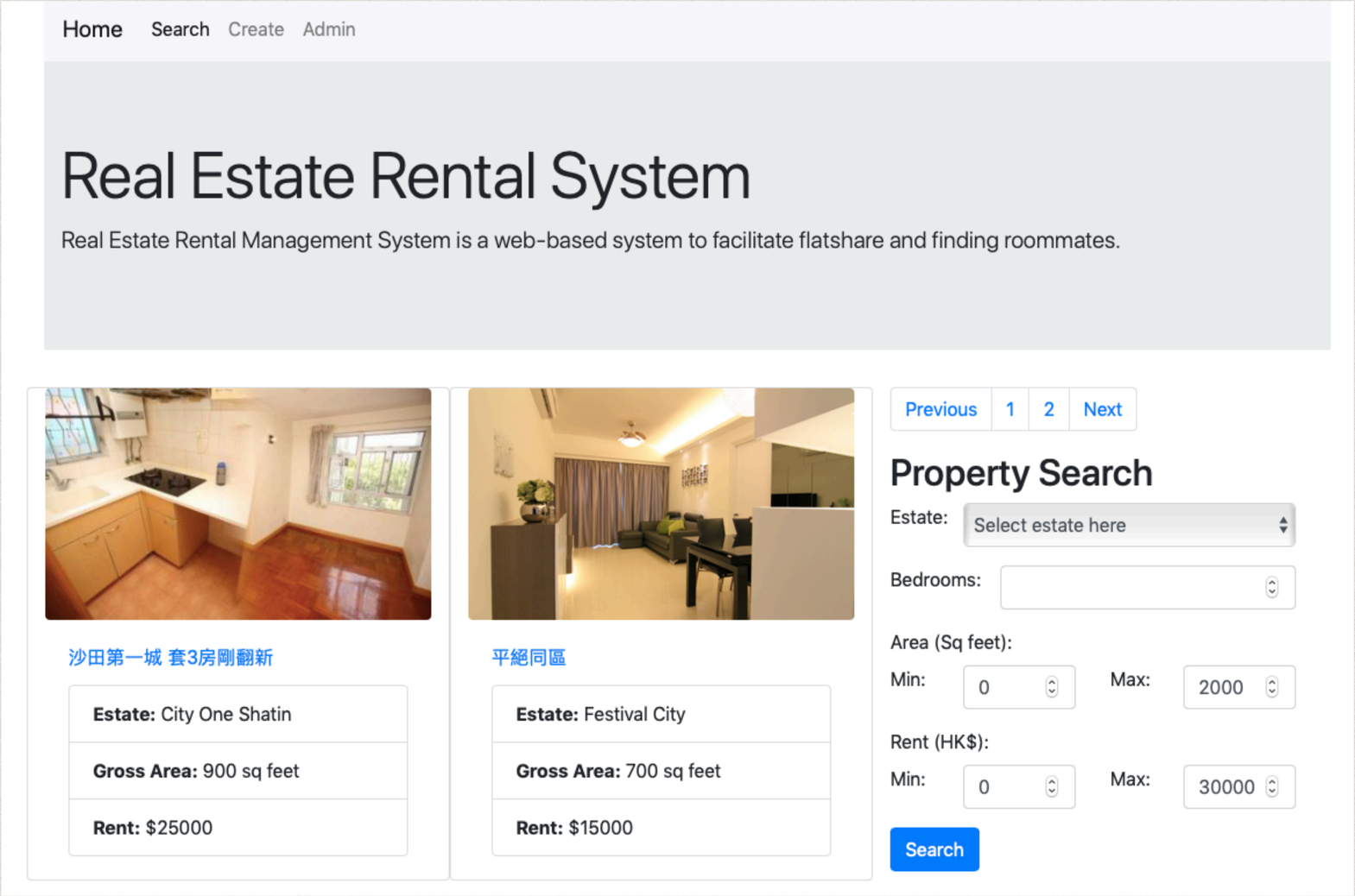
Update

- Also implement **delete** feature here.



Search

- **Pagination**
- Limited to 2 items per page
- **Search fields will be ignored** if no value is provided.



More requirements

- For **portrait mobile phone**, **develop one-column format** for all pages.
- Prepare initial data in **bootstrap.js**
- http://localhost:1337/ should show the **first page**.
- Use **GitHub** to maintain your project development.
- Due Date: **Oct 21**.

LET`S
WORK
TOGETHER
DO NOT
COPY

SOME HINTS FOR PROJECT MILESTONE 1

Checkbox

☐ Option 1

```
<input name="box" type="checkbox" value="dummy">
```

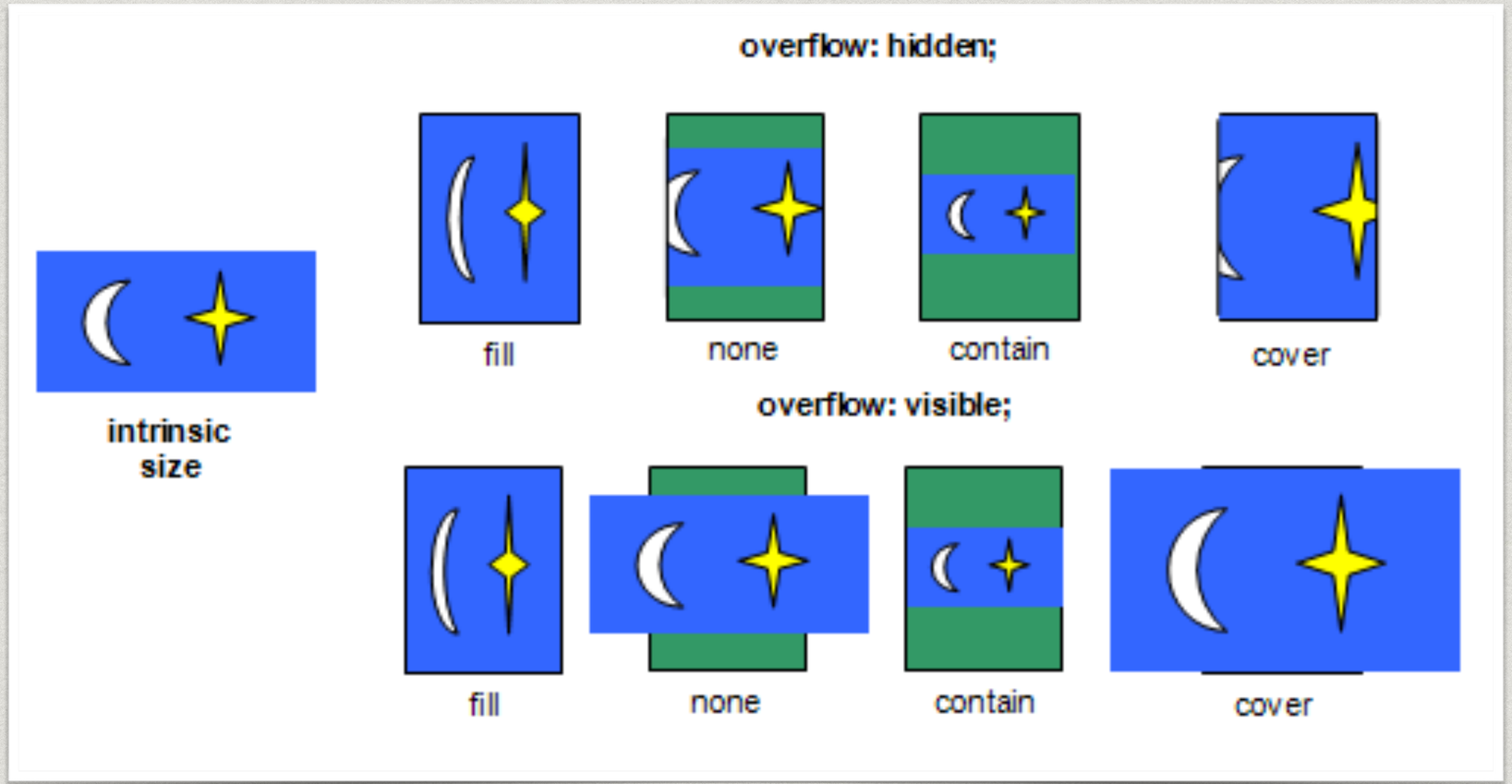
- When this checkbox is clicked, this form element, **together with its value**, is submitted to the server.
- If the box is NOT clicked, this form element won't be passed.

☑

```
<input name="box" type="checkbox" value="dummy" checked>
```

- The box would be checked if the **checked** attribute is provided in the opening tag.

CSS Object-fit



https://www.w3.org/TR/2011/WD-css3-images-20110217/#object-fit0

QuerySelector

- The Document method querySelector() returns the first Element within the document **that matches the specified selector, or group of selectors**.
- If no matches are found, null is returned.
- For example:

```
document.querySelector('option[value="Elements"]')
```

Selector

- Read: https://api.jquery.com/category/selectors/

Element Selector ("element")

Selects all elements with the given tag name.

Class Selector (".class")

Selects all elements with the given class.

ID Selector ("#id")

Selects a single element with the given id attribute.

Attribute Equals Selector [name="value"]

Selects elements that have the specified attribute with a value exactly equal to a certain value.

Date Object in JavaScript

- The **Date** object is used to work with dates and times.
- Date objects are created with **new Date()**.
- There are four ways of instantiating a date:

```
var d = new Date();
var d = new Date(milliseconds);
var d = new Date(dateString);
var d = new Date(year, month, day, hours, minutes, seconds, milliseconds);
```

- To language sensitive **representation of the date portion of this date**, we may use

```
new Date().toLocaleDateString();
```

Date and Range Checking

- Under Sails, a **date** could be saved as type "**ref**", with a special **columnType**.
  - Indicates the type of **physical-level column** data type to use for an attribute when Sails creates the database table.
- Finally, here's an example of **range check** in Controller actions:

```
Model.find({ age: { '>=': 21, '<=': 25 }})
```

```
module.exports = {

  attributes: {

    attr1: {
      type: 'ref',
      columnType: 'datetime'
    },
    attr2: {
      type: 'ref',
      columnType: 'datetime'
    }

  }
};
```