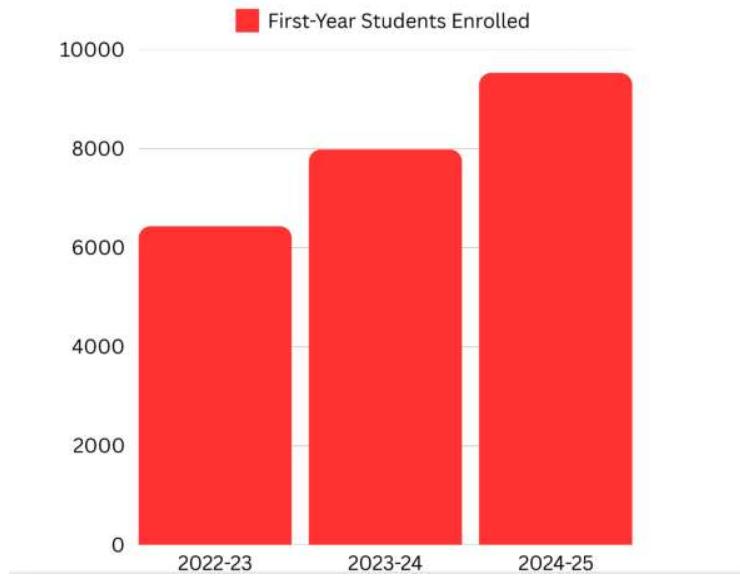


*Buckeye Living*TM



Ohio State is a growing university



There was a
16% increase
in enrollment for
the 2024-2025
school year

OHIO STATE ALLOWS SECOND-YEAR STUDENTS TO LIVE IN OFF-CAMPUS APARTMENT COMPLEX AMID ON-CAMPUS HOUSING CONCERNS

September 3, 2024 · Lily Pace

Ohio State University orders all students to leave Lawrence Tower after mold found inside dorm

WOSU 89.7 NPR News | By George Shillcock
Published November 22, 2024 at 3:31 PM EST



More than 30 students suing Ohio State University over mold in dorm rooms

Share

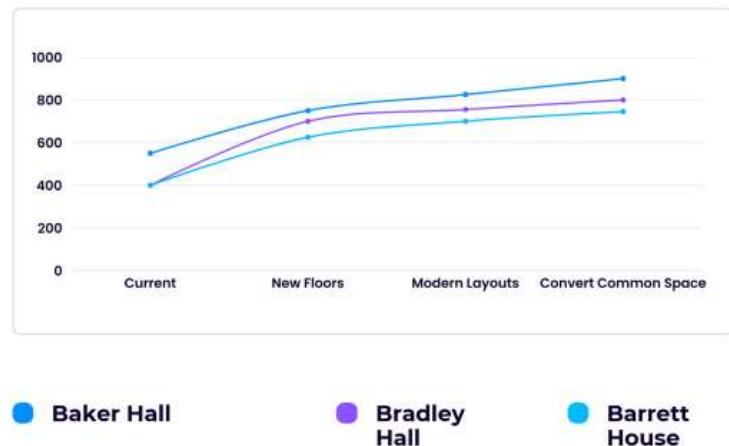


Updated: 5:11 PM EST Jan 14, 2025

The
current
housing
situation...

What's being done?

Projected Increase in Student Housing Capacity
After Redevelopment

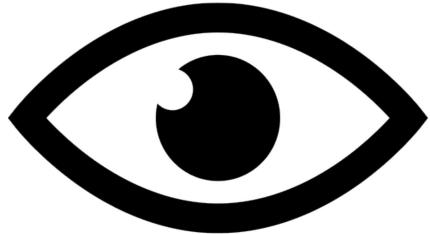


*Plans for
redevelopment of older
buildings in place*



What can be
done now?

Who are we?



*"We envision a college living experience where students don't have to worry about **basic housing necessities** and maintenance."*



*"To provide enough **comfortable, safe, modern, and practical** housing for the growing population of Ohio State students."*

Goals

-  Improved housing allocation efficiency
-  Improved maintenance and service request process
-  Enhanced student and parent satisfaction

MVP MOSCOW



PROVIDING IN-APP MAINTENANCE
REPORTS FOR STUDENTS.



PROVIDING STUDENTS WITH THE ABILITY
TO SELECTING DORM HOUSING AND VIEW
WAITLISTS THROUGH THE APP.

User: OSU Student



Description:

Students who live in on campus housing.

Wants to have a choice in which dorm they live in.

Wants a clean dorm that always has functional utilities.

As a Student, I Want To:

Modify my housing so that I can find a dorm that best suits my needs.

Be considered for waitlisted housing so that I can receive a housing assignment that best fits me.

Live in a dorm with working utilities so that I can stay satisfied and healthy.

User: Housing Staff



Description:

Staff that conducts maintenance and inspection in residence halls.

Wants to ensure students' safety and well-being while living in dorms.

Wants to reduce the number of housing-related complaints

As a Housing Staff, We Want To:

Quickly address maintenance requests so students remain satisfied, and facilities are kept in good condition.



How Will People Use Our App?

OSU Students:

Submit Housing Maintenance Requests

Submit Housing Assignment Requests

Housing Staff:

Receiving Housing Maintenance Requests

Use Case 1: Submit Housing Assignment Request

Actor: OSU Student

Input Data: Housing Selection

Output Data: Housing and Waitlist choices

Invariants: Student signed into OSU account

Pre-Conditions: Student wants to pick or edit their housing assignment

Post-Conditions: Housing selection saved

Basic Flow:

1. The student opens the app
2. The system displays a list of available and waitlisted housing
3. The student selects their desired options for housing and waitlisted housing
4. The system saves the students current selections
5. The student submits their final housing selections
6. The system saves the students housing selections and assigns them to an appropriate residence hall

Use Case 2: Submit Housing Maintenance Request

Actors: OSU Student and Housing Staff

Input Data: Name, Service Type, Preferred Time, Additional Comments

Output Data: Maintenance order sent to system, Confirmation message to student

Invariants: Student provides accurate details

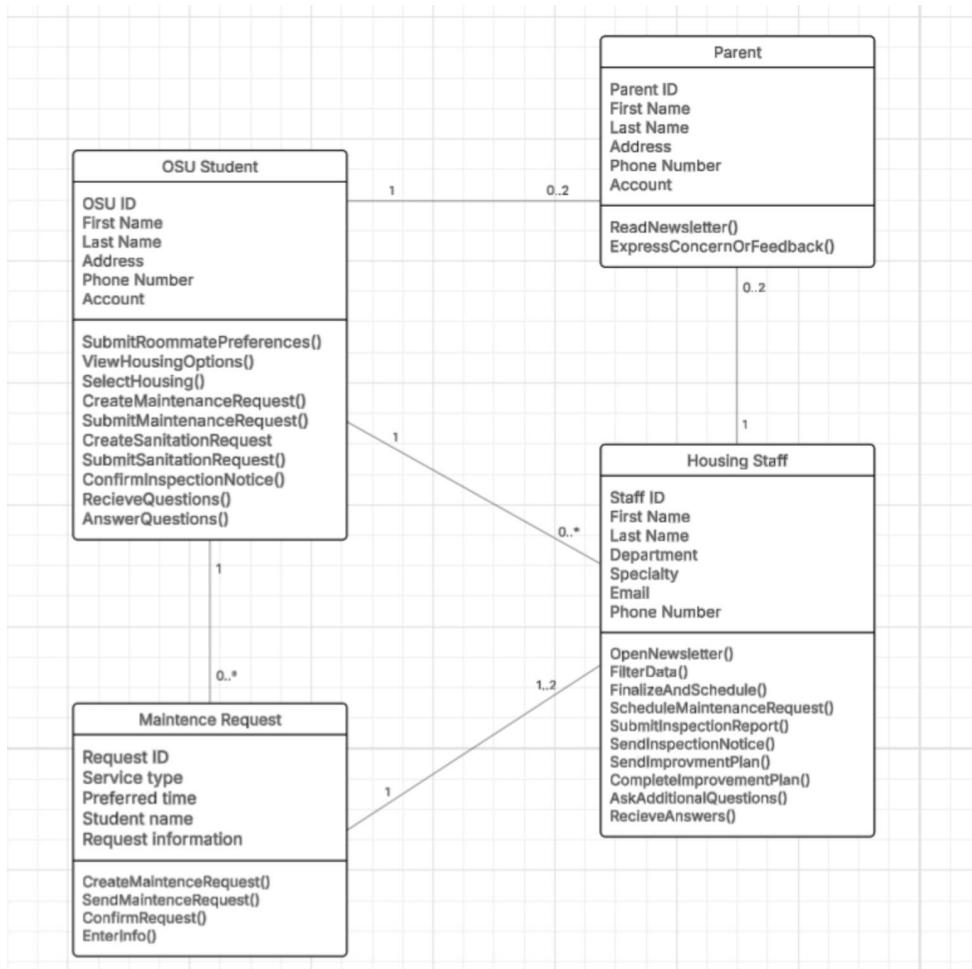
Pre-Conditions: Student knows how to operate app

Post-Conditions: Request is logged and scheduled, Student receives confirmation

Basic Flow:

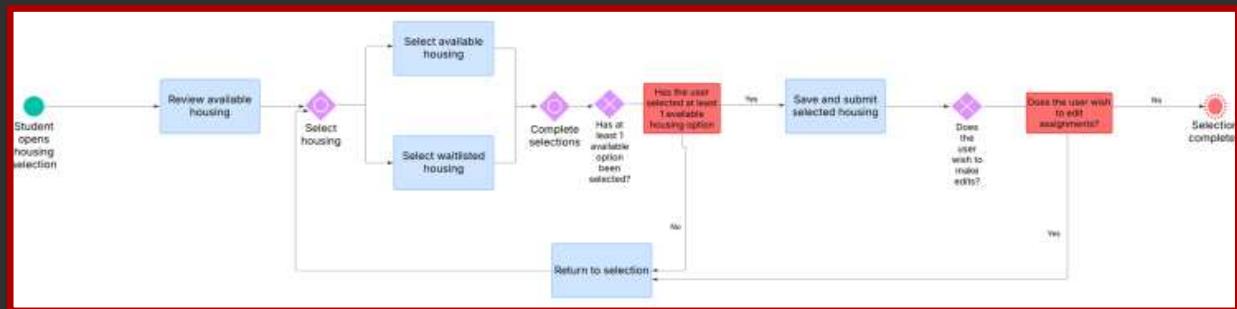
1. The student opens the housing app.
2. The student selects the "Maintenance Order" section.
3. The system prompts the student to select a maintenance service type and input relevant details.
4. The student submits the maintenance order request.
5. The system logs the request and schedules it in the maintenance service system.
6. The housing staff reviews the order and updates the status.
7. The student receives confirmation of the scheduled maintenance service.

Class Diagram

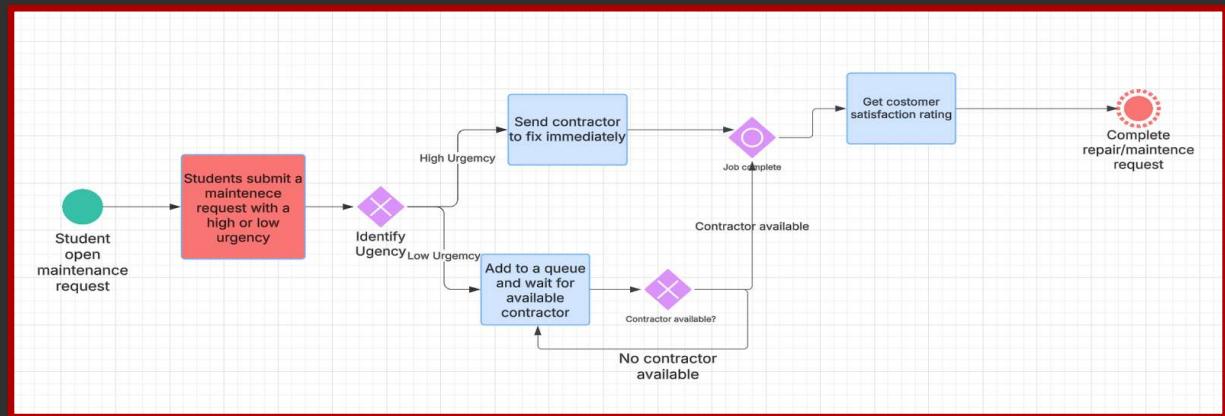


Business Processss

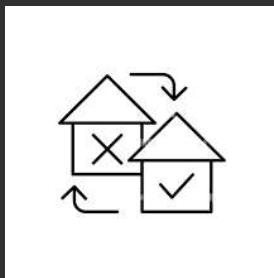
Housing Selection & Waitlist



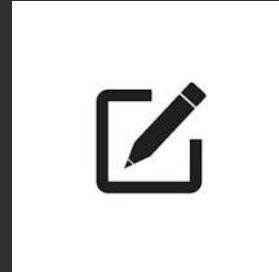
Housing Maintenance & Repairs



Business Rules



1. Backup Housing Required



2. Editable Housing Requests



3. Repair Completion Timeframes

Impact Map

IM001 – Students

Increase student roommate satisfaction by 50%

IM002 – Students

Improve student housing selection satisfaction by 25%

IM003 – Parents

Improve parent satisfaction by 25%

IM004 – Housing Staff

Increase rate of housing repairs and maintenance by 30%

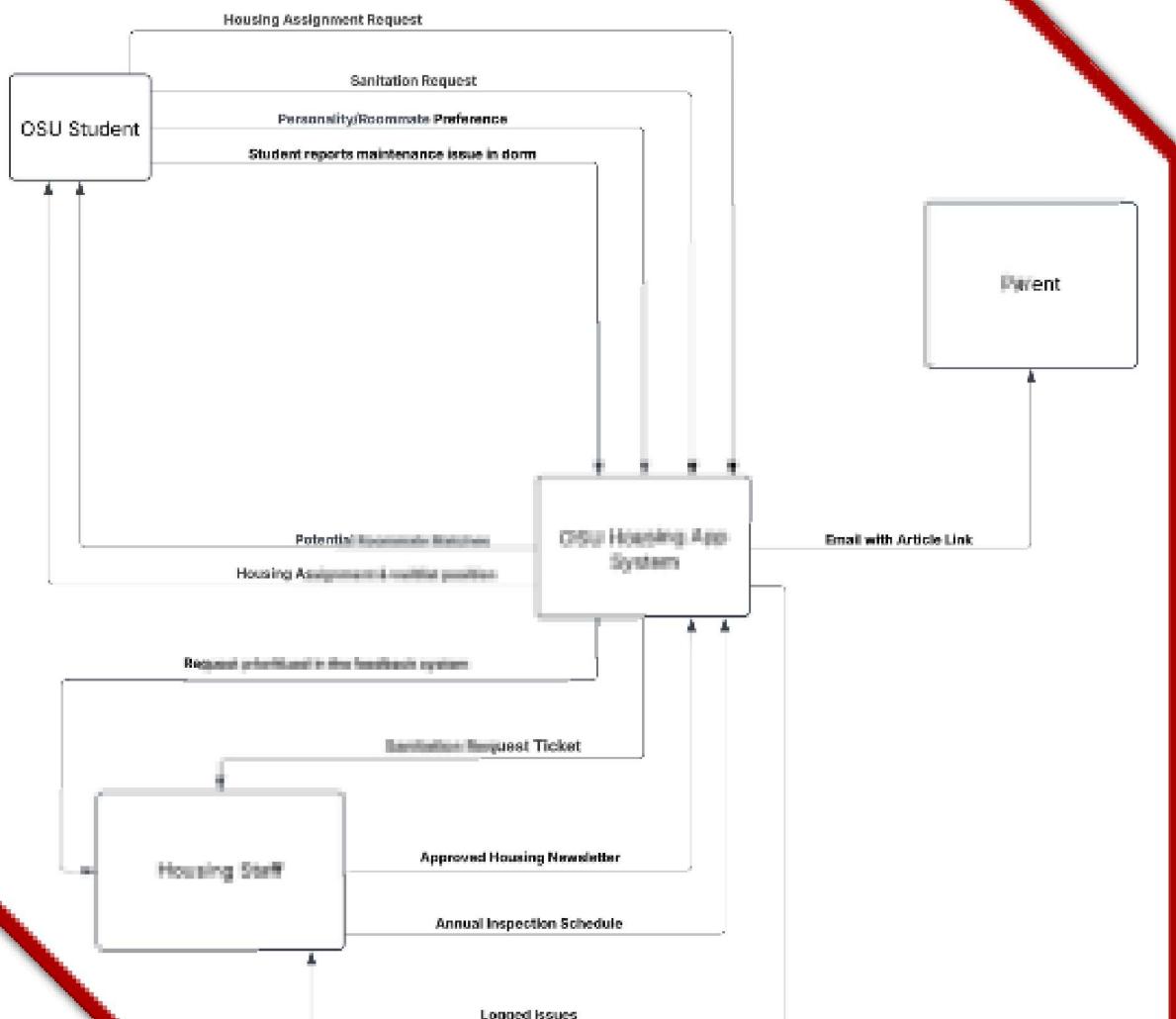
IM005 – Housing Staff

Ensure all housing is 98% damage-free by the end of each academic year

IM006 – Housing Staff

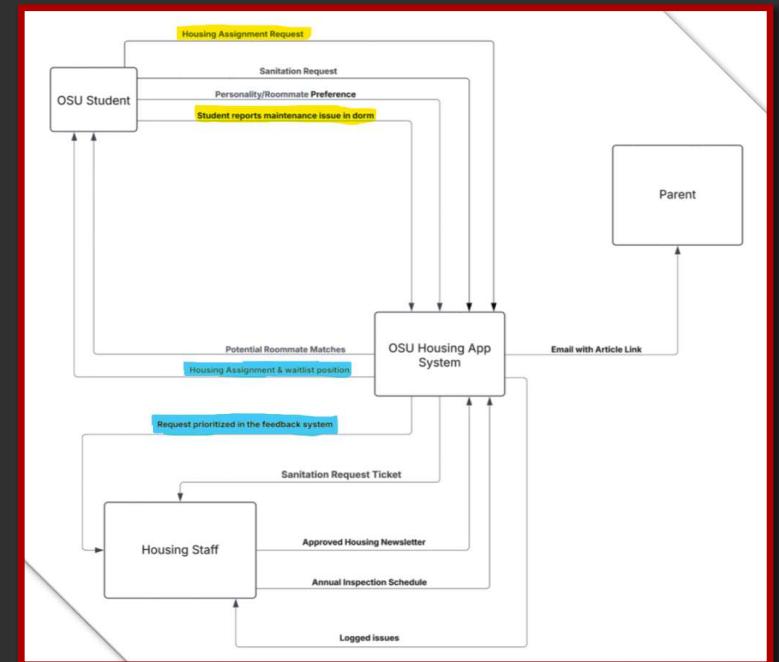
Increase sanitation satisfaction in residence halls by 50%

Context Diagram



Housing Registration Event

- Student wants to register for housing waitlist
 - **Trigger:** Student will submit their requested housing selection
 - **Activity:** Student's new housing selection is updated
 - **Response:** Housing priority is updated within system
 - **Destination:** Housing Staff



Maintenance Request Event

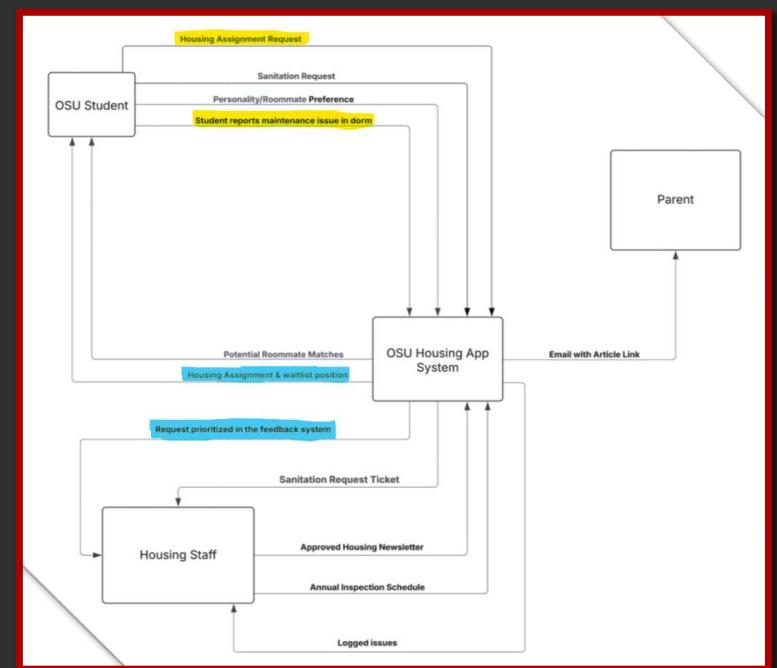
- Student wishes to submit a maintenance request

Ø **Trigger:** Student reports maintenance issue in dorm

Ø **Activity:** Maintenance request information intake

Ø **Response:** Request is prioritized in feedback system

Ø **Destination:** Housing Staff



Functional Objectives

- The system shall allow students to register for and be assigned to OSU residence housing
 - Benefits by increasing student satisfaction with their given housing assignment
 - Goal of increasing student satisfaction by 25%
- The system shall allow students to submit a maintenance request through the app
 - Benefits allowing faster dorm maintenance response times
 - Goal of ensuring all housing is 98% free of damage by end of semester



Nonfunctional Requirements



**Requests received
by housing staff <
one minute of
request
submission.**



The app will be **cross platform** with iOS (v16+) and Android (v7+).



**Two-factor
authentication** required
to access account
information via phone
number or email.

Nonfunctional Requirements



Supports up to **500 users** during normal operations and **3,000 in peak periods.**



Nightly backups from 2am to 6am for critical data.
Data retained for minimum of **30 days**.

Object Interaction Diagrams

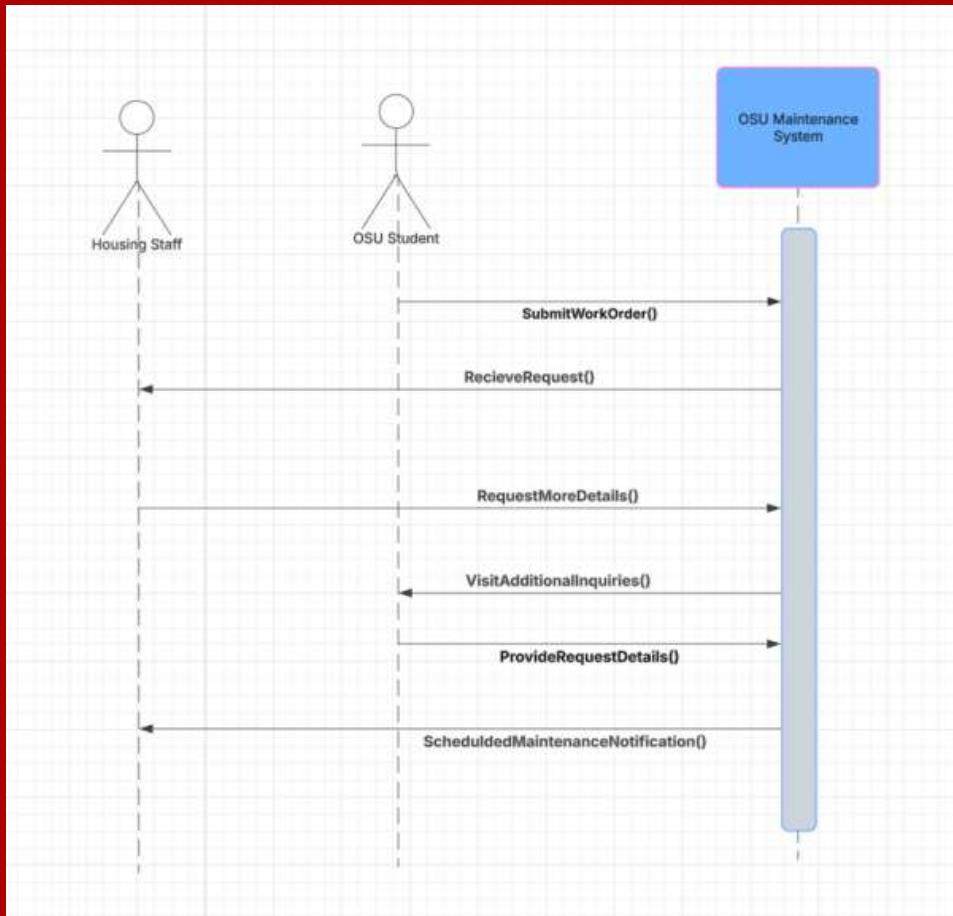
Maintenance Request

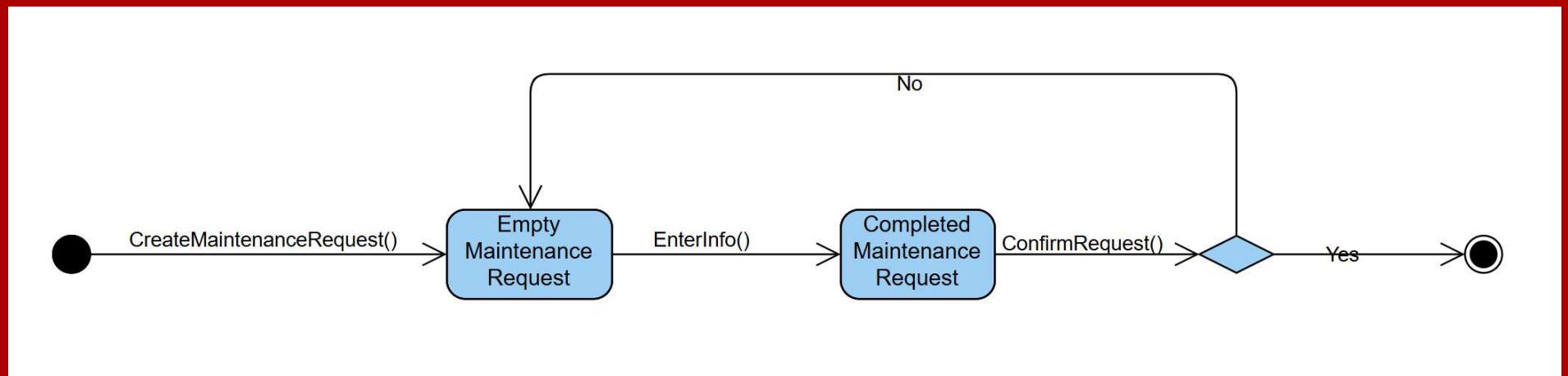


Persona(s) Involved: OSU Student & Housing Staff



Goal: Schedule maintenance servicing in student residence halls and get quick service.





Maintenance Request State Changes

9:41

■ ■ ■ ■ ■ Wi-Fi Battery

 Maintenance Request

Name: **OSU Student**

Category: **Help my room is a sauna!**

Additional Information:

My room is stuck at 85°F and feels like a sauna. I tried turning down the thermostat and opening the window, but it's still hotter inside than outside. It's hard to sleep, study, or exist without melting. Please send someone before I turn into a puddle.

Attach Photo: 

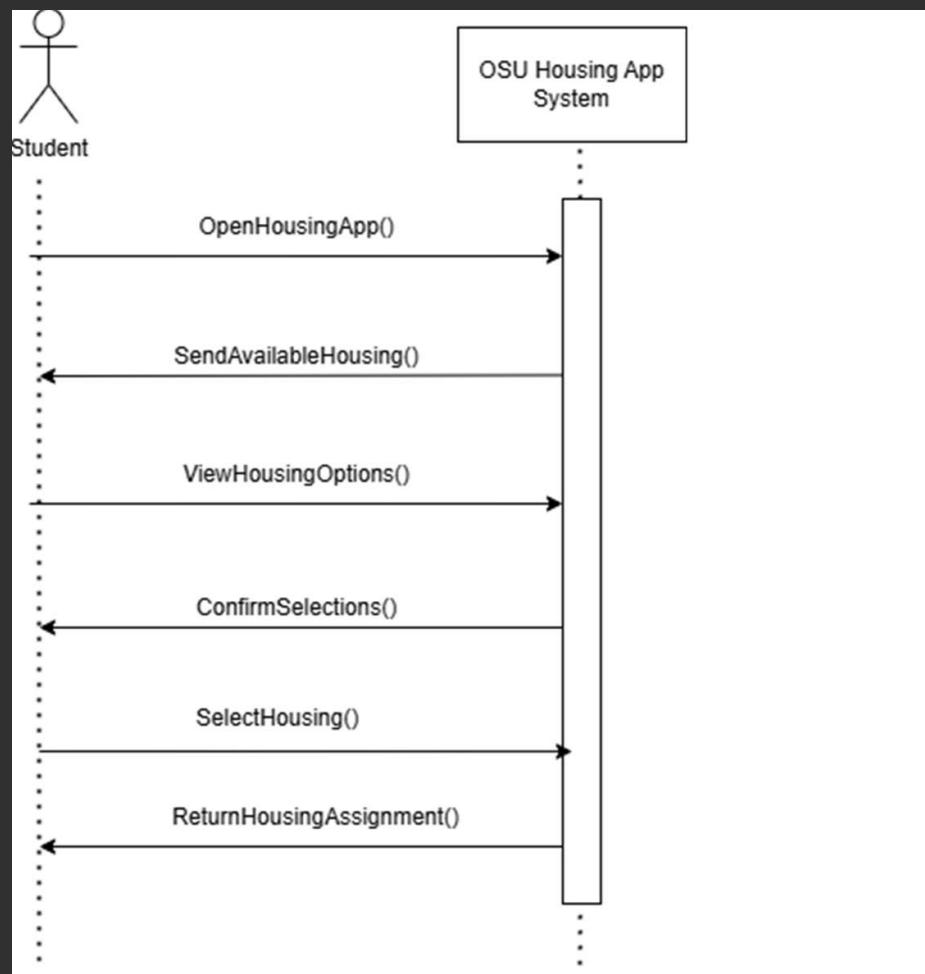
[Submit Request](#)

Prototype

Problem: Students living in dorms notice maintenance issues early but need a faster and more convenient way to report them.

Solution: Streamlined maintenance request system operated by housing staff helps them respond more quickly.





Object Interaction Diagrams

Housing Selection

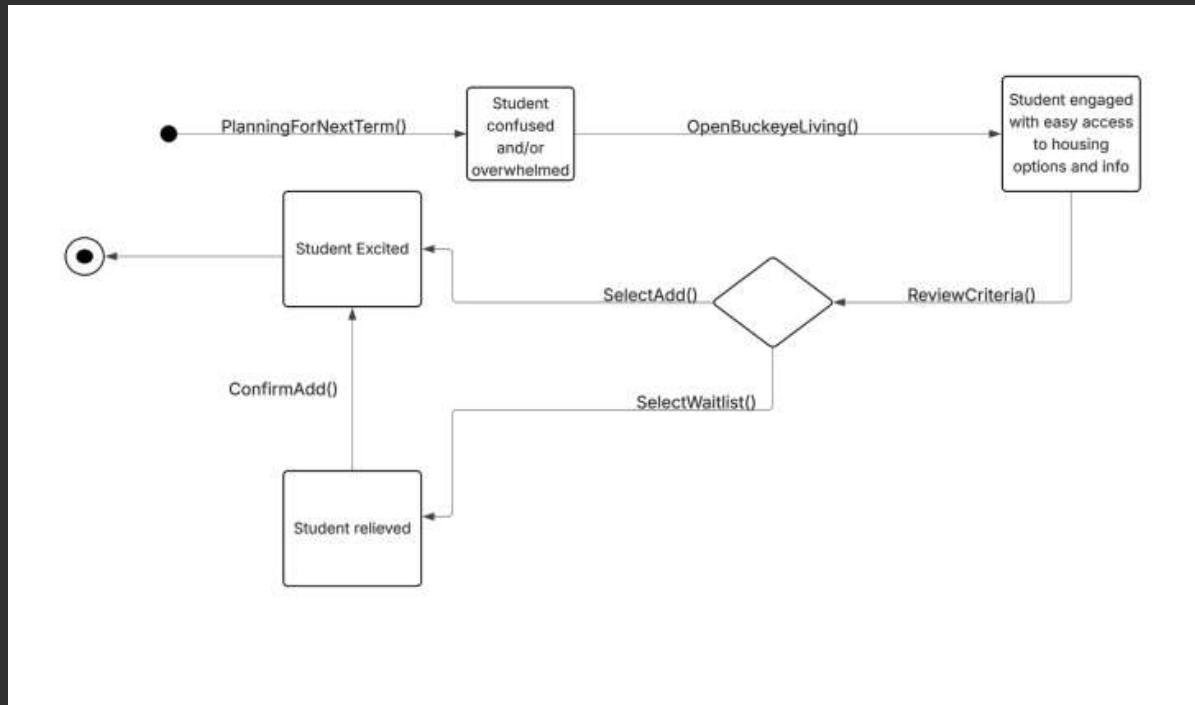


Persona(s) Involved: OSU Student



Goal: Select and compare housing options at OSU as incoming first-year or returning second-year with ease. (to save the thinking for the classes!)

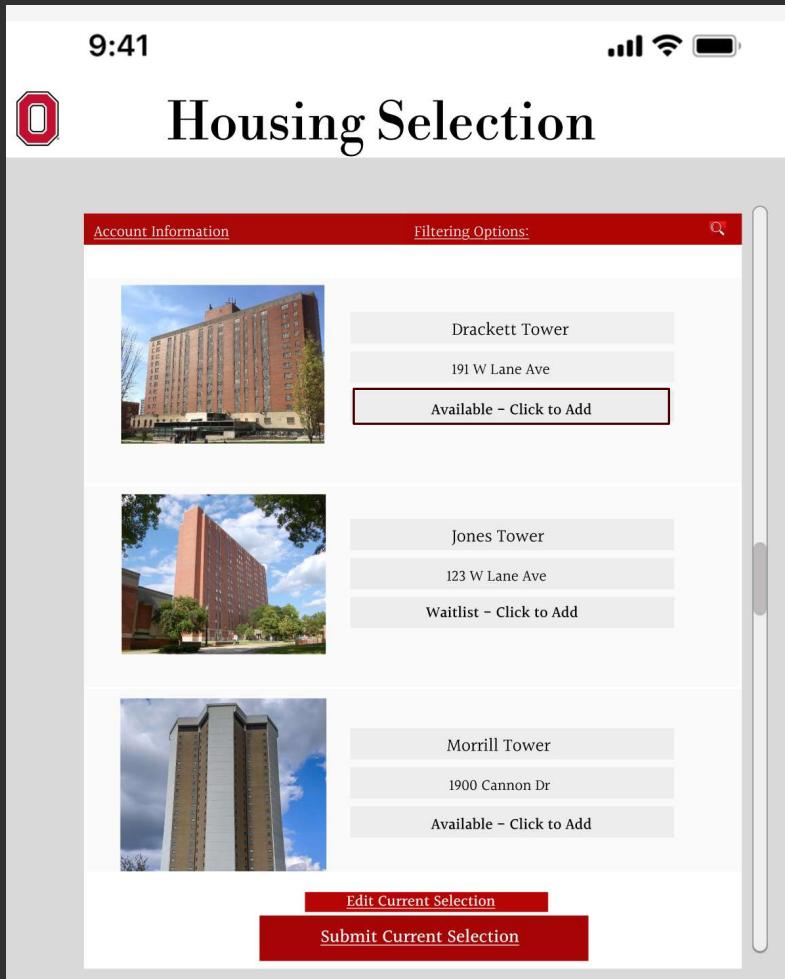
Housing Selection State Changes



OSU student is planning for housing and is confused.

Student becomes engaged with ease of Buckeye Living capabilities.

Option to Add or Waitlist, result in an excited student ready for the upcoming term.



Prototype

Problem: Students struggle with a limited and confusing housing selection process, making it harder to secure comfortable, practical living spaces.

Solution: Buckeye Living offers real-time availability and waitlist options, while allowing easy selection and changes, supports Ohio State's mission to provide safe, modern housing and reduce student stress.

