

# APARTMENT MANAGEMENT SYSTEM (AMS)

## ○ CONTRIBUTORS

1. Khawaja Abdul Moiz
2. Muhammad Harim
3. Areeb Alvi

### ➤ Purpose:

The purpose of an "Apartment Management System" is to facilitate efficient and organized management of various tasks and processes related to the administration and maintenance of apartment complexes or residential buildings. The system is designed to streamline operations for property managers, tenants, and other stakeholders. Here are some common purposes of an Apartment Management System:

#### **Tenant Management:**

- Keep track of tenant information, including contact details, lease agreements, and payment history.
- Automate the process of tenant onboarding and off boarding.

#### **Rent and Billing:**

- Manage rent collection, generate invoices, and keep a record of payment transactions.
- Provide automated reminders for upcoming rent payments.

#### **Maintenance Requests:**

- Allow tenants to submit maintenance requests through the system.
- Streamline the process of assigning and tracking maintenance tasks.
- Amenities and Facilities Management:
- Keep a record of available amenities and facilities in the apartment complex.
- Schedule maintenance and cleaning for shared spaces such as gyms, pools, and common areas.

**Communication:**

- Facilitate communication between property managers and tenants.
- Provide a platform for announcements, notifications, and updates.

**Security and Access Control:**

- Implement features for managing access control, such as keyless entry systems or visitor management.
- Keep track of security-related incidents and measures.

**Document Management:**

- Store and manage important documents related to property ownership, contracts, and legal agreements.

**Financial Reporting:**

- Generate financial reports for property owners and managers.
- Keep track of expenses, revenue, and overall financial health of the property.

**Occupancy and Vacancy Tracking:**

- Monitor and manage the occupancy status of individual units.
- Plan for upcoming vacancies and coordinate leasing efforts.

**Compliance and Regulations:**

- Ensure compliance with local regulations and housing laws.
- Store relevant compliance documentation.

By addressing these aspects, an Apartment Management System aims to enhance the overall efficiency of property management, improve communication between stakeholders, and create a more convenient and enjoyable living experience for tenants.

**➤ Functionality:**

The functionality of an Apartment Management System encompasses a wide range of features to address the needs of property managers, tenants, and other stakeholders involved in the management of residential complexes. Here are the key functionalities typically found in such a system:

1. User Authentication and Authorization
2. Tenant Information Management
3. Rent and Billing Management
4. Maintenance Request System
5. Amenities and Facilities Management
6. Communication Platform
7. Security and Access Control
8. Document Storage and Management
9. Financial Reporting
10. Occupancy and Vacancy Tracking
11. Compliance Monitoring
12. Analytics and Reporting
13. Data Security and Privacy

By incorporating these functionalities, an Apartment Management System aims to automate and streamline various aspects of property management, enhancing the overall efficiency and experience for both property managers and tenants.

### ➤ **Usage Instructions for AMS:**

Usage instructions for an Apartment Management System. Note that these are general guidelines, and the specifics may vary based on the actual implementation and technology stack used in the project.

# 1. User Registration and Login:

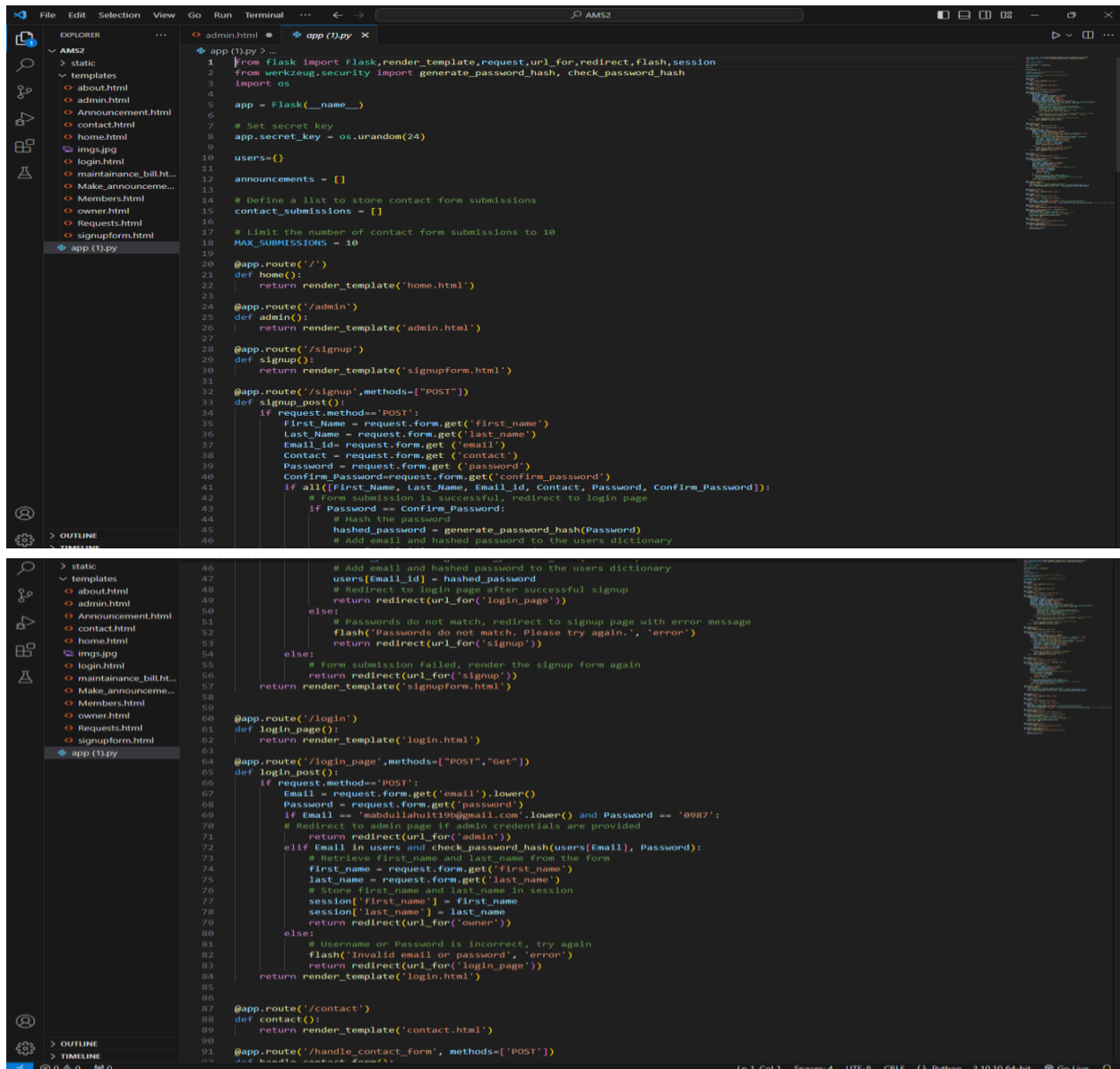
## ▪ For Property Managers:

- Register with the system using a valid email address.
- Log in using the registered credentials.

## ▪ For Tenants:

- Receive login credentials from the property manager or use a self-registration feature.
- Log in to the system.

## ➤ Screen Shots:



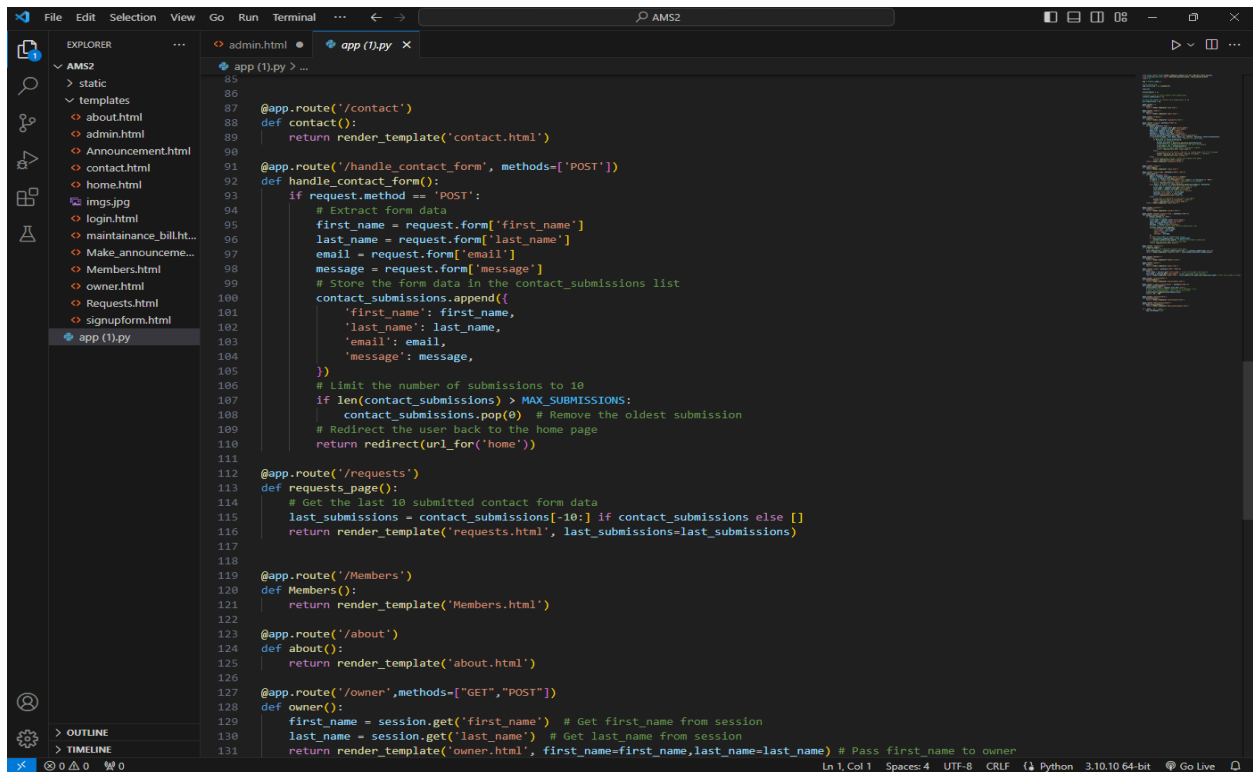
The image displays two screenshots of a code editor, likely VS Code, showing the implementation of a Flask web application for user registration and login. The editor has a dark theme and a sidebar on the left showing the project structure.

**Top Screenshot:** Shows the `app.py` file. The code defines the Flask application, sets a secret key, and initializes a `users` dictionary. It includes routes for `home`, `admin`, and `signup`. The `signup` route handles POST requests, validates the password, hashes it, and adds the user to the `users` dictionary. It also includes a `confirm_password` field for password confirmation.

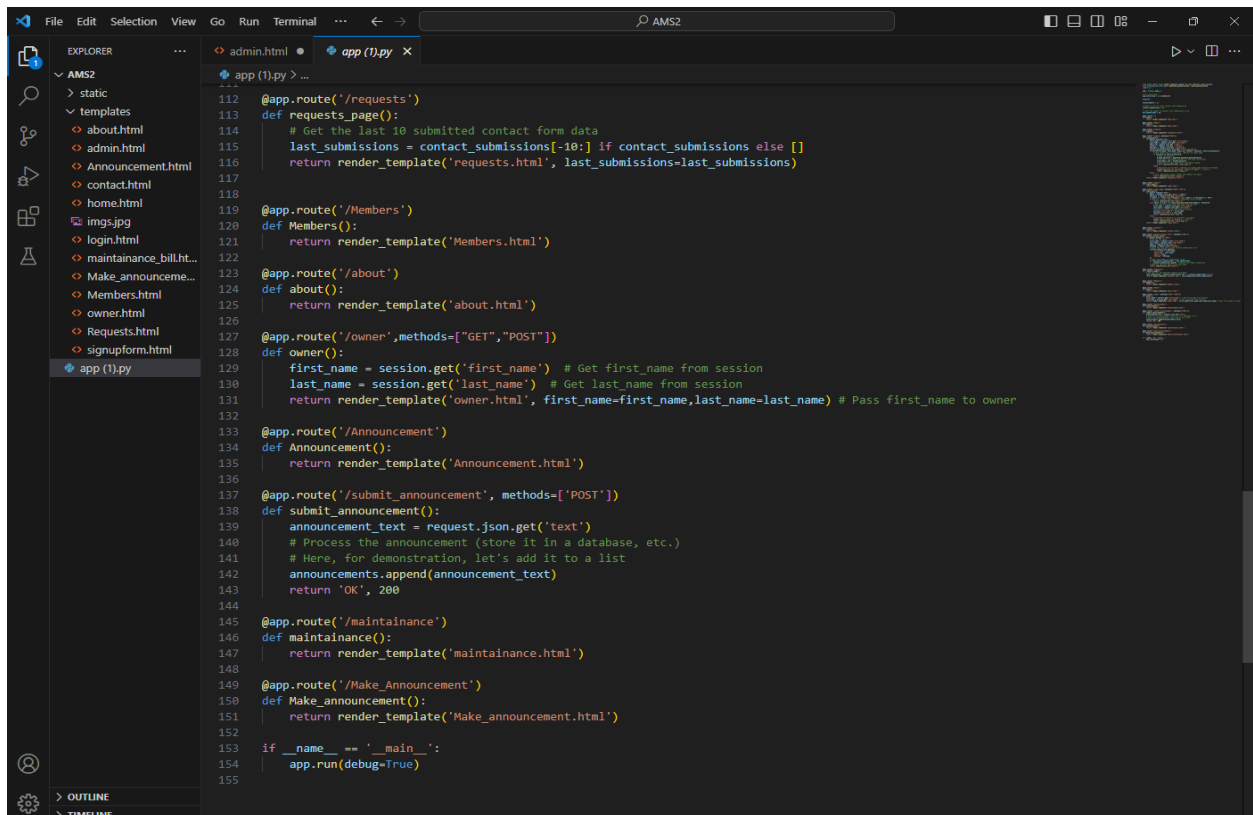
```
1 from flask import Flask, render_template, request, url_for, redirect, flash, session
2 from werkzeug.security import generate_password_hash, check_password_hash
3 import os
4
5 app = Flask(__name__)
6
7 # Set secret key
8 app.secret_key = os.urandom(24)
9
10 users = {}
11
12 announcements = []
13
14 # Define a list to store contact form submissions
15 contact_submissions = []
16
17 # Limit the number of contact form submissions to 10
18 MAX_SUBMISSIONS = 10
19
20 @app.route('/')
21 def home():
22     return render_template('home.html')
23
24 @app.route('/admin')
25 def admin():
26     return render_template('admin.html')
27
28 @app.route('/signup')
29 def signup():
30     return render_template('signupform.html')
31
32 @app.route('/signup', methods=["POST"])
33 def signup_post():
34     if request.method == "POST":
35         First_Name = request.form.get('first_name')
36         Last_Name = request.form.get('last_name')
37         Email_id = request.form.get('email')
38         Contact = request.form.get('contact')
39         Password = request.form.get('password')
40         Confirm_Password = request.form.get('confirm_password')
41         if all([First_Name, Last_Name, Email_id, Contact, Password, Confirm_Password]):
42             # Form submission is successful, redirect to login page
43             if Password == Confirm_Password:
44                 # Hash the password
45                 hashed_password = generate_password_hash(Password)
46                 # Add email and hashed password to the users dictionary
```

**Bottom Screenshot:** Continues the `signup_post` function and adds the `login` route. The `login` route handles both POST and GET requests. It checks if the email and password match the user in the `users` dictionary. If they match, it logs the user in and redirects to the `owner` page. If not, it flashes an error message and redirects back to the `login` page.

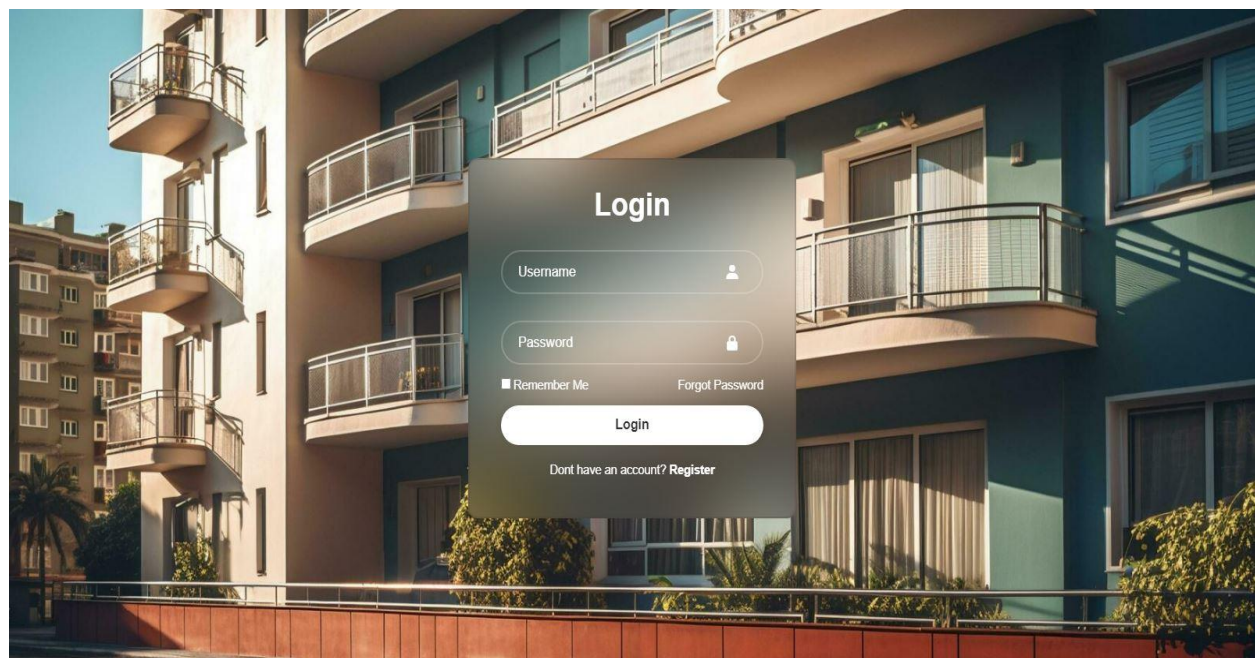
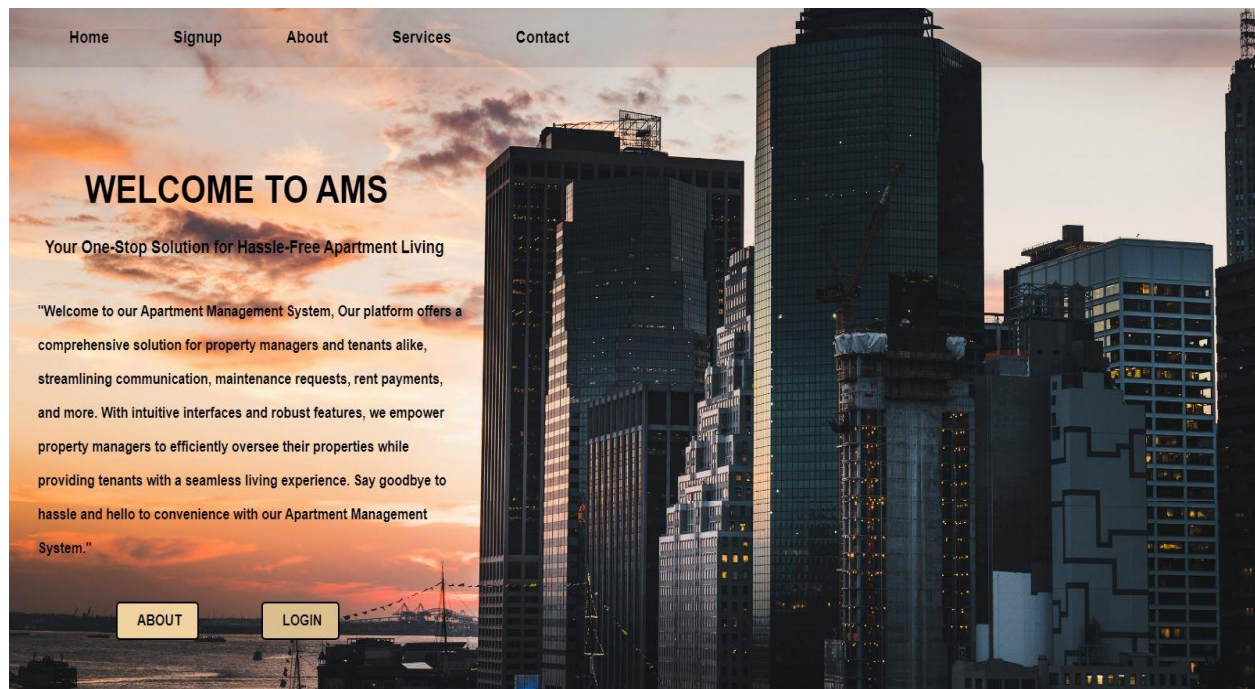
```
47     # Add email and hashed password to the users dictionary
48     users[Email_id] = hashed_password
49     # Redirect to login page after successful signup
50     return redirect(url_for('login_page'))
51 else:
52     # Passwords do not match, redirect to signup page with error message
53     flash('Passwords do not match. Please try again.', 'error')
54     return redirect(url_for('signup'))
55
56 else:
57     # Form submission failed, render the signup form again
58     return redirect(url_for('signup'))
59
60 @app.route('/login')
61 def login_page():
62     return render_template('login.html')
63
64 @app.route('/login_page', methods=["POST", "GET"])
65 def login_post():
66     if request.method == "POST":
67         Email = request.form.get('email').lower()
68         Password = request.form.get('password')
69         if Email == 'mohdullah123@gmail.com'.lower() and Password == '0987':
70             # Redirect to admin page if admin credentials are provided
71             return redirect(url_for('admin'))
72         elif Email in users and check_password_hash(users[Email], Password):
73             # Retrieve first name and last name from the form
74             first_name = request.form.get('first_name')
75             last_name = request.form.get('last_name')
76             # Store first name and last name in session
77             session['first_name'] = first_name
78             session['last_name'] = last_name
79             return redirect(url_for('owner'))
80         else:
81             # Username or Password is incorrect, try again
82             flash('Invalid email or password', 'error')
83             return redirect(url_for('login_page'))
84     return render_template('login.html')
85
86
87 @app.route('/contact')
88 def contact():
89     return render_template('contact.html')
90
91 @app.route('/handle_contact_form', methods=["POST"])
```



```
85
86
87 @app.route('/contact')
88 def contact():
89     return render_template('contact.html')
90
91 @app.route('/handle_contact_form', methods=['POST'])
92 def handle_contact_form():
93     if request.method == 'POST':
94         # Extract form data
95         first_name = request.form['first_name']
96         last_name = request.form['last_name']
97         email = request.form['email']
98         message = request.form['message']
99         # Store the form data in the contact_submissions list
100         contact_submissions.append({
101             'first_name': first_name,
102             'last_name': last_name,
103             'email': email,
104             'message': message,
105         })
106         # Limit the number of submissions to 10
107         if len(contact_submissions) > MAX_SUBMISSIONS:
108             contact_submissions.pop(0) # Remove the oldest submission
109         # Redirect the user back to the home page
110         return redirect(url_for('home'))
111
112 @app.route('/requests')
113 def requests_page():
114     # Get the last 10 submitted contact form data
115     last_submissions = contact_submissions[-10:] if contact_submissions else []
116     return render_template('requests.html', last_submissions=last_submissions)
117
118
119 @app.route('/Members')
120 def Members():
121     return render_template('Members.html')
122
123 @app.route('/about')
124 def about():
125     return render_template('about.html')
126
127 @app.route('/owner', methods=['GET', 'POST'])
128 def owner():
129     first_name = session.get('first_name') # Get first_name from session
130     last_name = session.get('last_name') # Get last_name from session
131     return render_template('owner.html', first_name=first_name, last_name=last_name) # Pass first_name to owner
```



```
129
130
131     return render_template('owner.html', first_name=first_name, last_name=last_name) # Pass first_name to owner
132
133 @app.route('/Announcement')
134 def Announcement():
135     return render_template('Announcement.html')
136
137 @app.route('/submit_announcement', methods=['POST'])
138 def submit_announcement():
139     announcement_text = request.json.get('text')
140     # Process the announcement (store it in a database, etc.)
141     # Here, for demonstration, let's add it to a list
142     announcements.append(announcement_text)
143     return 'OK', 200
144
145 @app.route('/maintenance')
146 def maintenance():
147     return render_template('maintenance.html')
148
149 @app.route('/Make_Announcement')
150 def Make_announcement():
151     return render_template('Make_announcement.html')
152
153 if __name__ == '__main__':
154     app.run(debug=True)
155
```







# Welcome to AMS

## Your Reliable Apartment Management Partner

### Our Mission

Our mission is simple: to provide an intuitive, efficient, and accessible apartment management solution that meets the needs of property managers, landlords, and residents. We believe that effective property management is the key to creating harmonious living spaces, and our system is designed to foster communication, efficiency, and satisfaction for all parties involved.

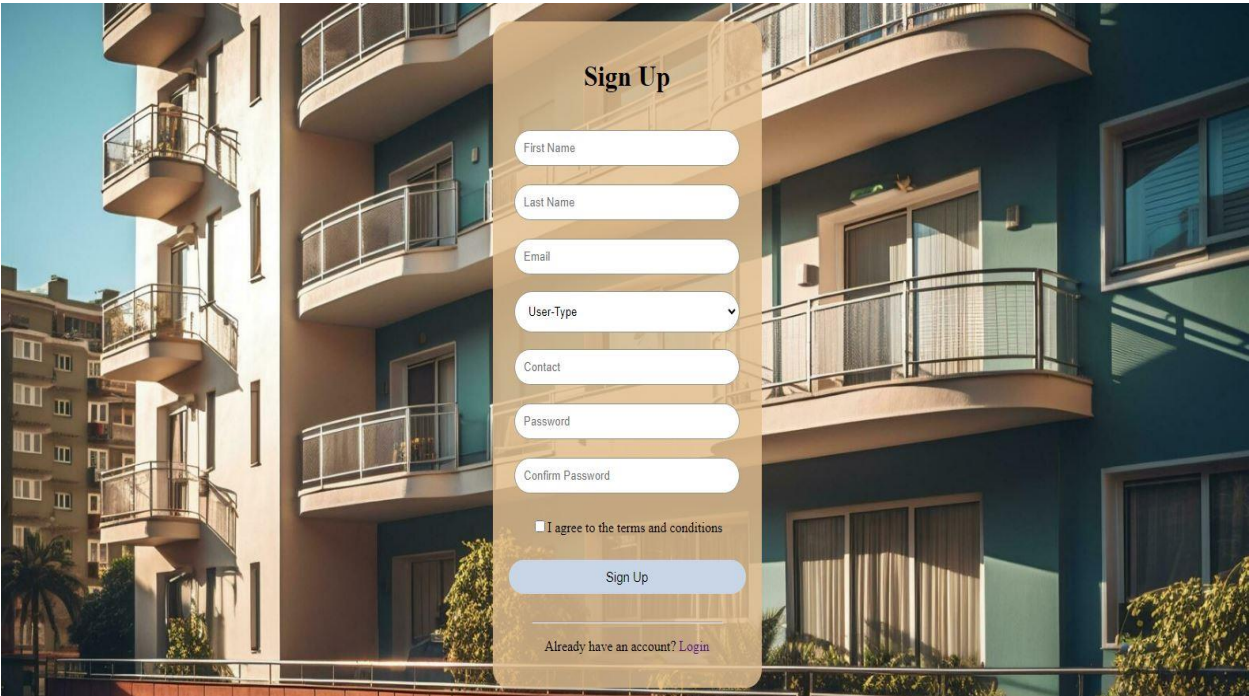
### What We Offer

AMS is more than just a management tool; it's a holistic platform that addresses every facet of apartment management. From rent collection and maintenance requests to tenant screening and document management, our system is equipped to handle it all. Our features include:

- Online Rent Payments: Secure and hassle-free transactions every time.
- Maintenance Request Portal: Quick and easy submission of maintenance requests with real-time updates.
- Tenant Screening: Comprehensive background checks to ensure community safety.
- Document Management: All your important documents stored securely in one place.
- Communication Tools: Seamless communication between

### Join Us

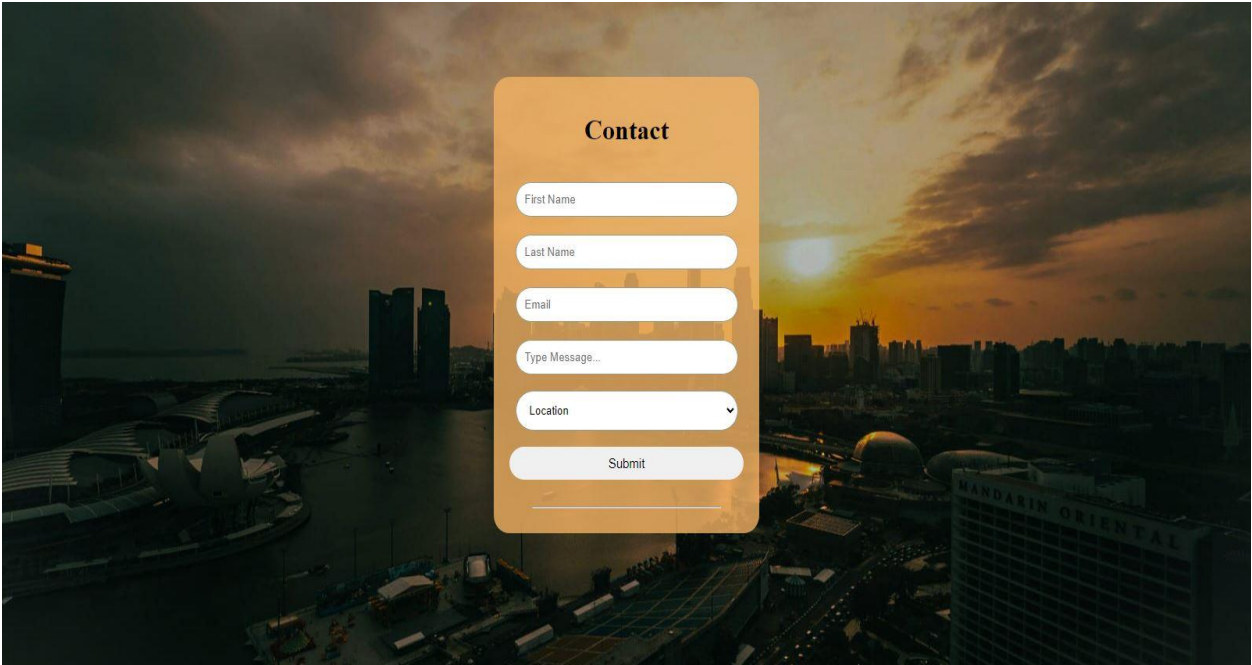
Embrace the future of apartment management with AMS. Let us help you transform your property management experience into a seamless, productive, and enjoyable journey. Contact us to learn more about how our system can benefit you.



### Sign Up

☐ I agree to the terms and conditions

[Already have an account? Login](#)



Admin Dashboard

Dashboard

Owner Management

Tenant Management

Apartment Management

Payment Management

Maintenance Requests

Reports

Settings and Configurations

Log Out

ADMIN

Dashboard

mm/dd/yyyy

Cash in Hand

50000Rs

This Month

55%

Total Expenses

110000Rs

This Month

70%

Remaining Expenses

61000Rs

This Month

40%

Recent Status

Tenant Name	House Number	Maintenance	Status	Date
Harim	A-310	4500	Paid	1-2-2024
Areeb	B-214	4500	Paid	3-2-2024
Molz	A-809	4500	Pending	---
Adil	C-308	Due	Paid	5-2-2024

Abdullah

Admin



## ➤ **Links:**

### **1.Github:**

<https://github.com/KhawajaAbdulMoiz/.AMS>

### **2.Video:**

<https://www.facebook.com/share/v/koLkwi4Vv4XqMPot/?mibextid=w8EBqM>