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I. Chosen Technology Stack

Python + Django

Python + TkInter

II. Persistent Storage Design

We are using an SQLite database to persist our data. Our database includes the tables shown below. It contains 6 tables. The tables have the following schema...

Candidate (

PK: IntegerField
username: CharField(max_length=30, unique=True)
password: CharField(max_length=30)
years: IntegerField
name: CharField(max_length=30)
skills: CharField(max_length=500)
zipcode: IntegerField

)

Recruiter (

PK: IntegerField
name: CharField(max_length=30)
company: CharField(max_length=30)
zipcode: IntegerField
username: CharField(max_length=30, unique=True)
password: CharField(max_length=30)

)

Post (

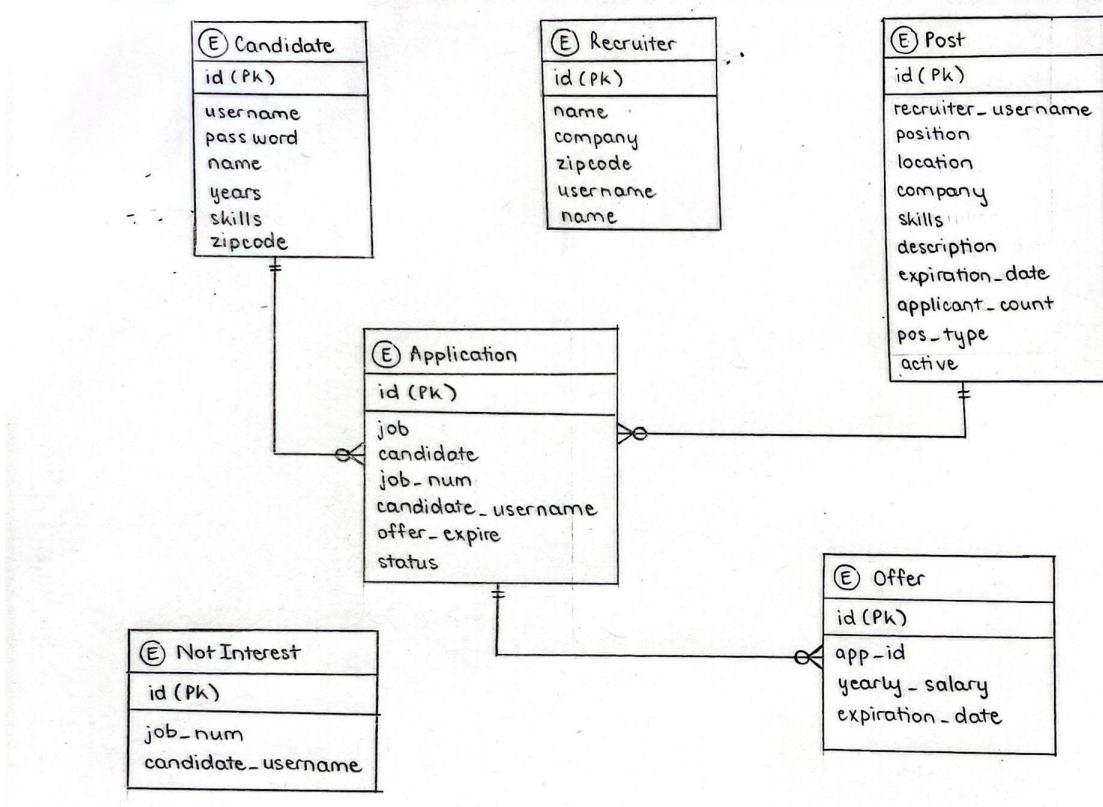
PK: IntegerField
recruiter_username: CharField(max_length=30)
position: CharField(max_length=30)
location: CharField(max_length=30)

```
        company: CharField(max_length=30)
        skills: CharField(max_length=500)
        description: CharField(max_length=500)
        expiration_date: DateField
        applicant_count: IntegerField
        pos_type: CharField
        active: CharField
    )
```

```
Application (
    PK: IntegerField
    job_num: IntegerField
    job: ForeignKey(Post)
    candidate_username = CharField
    candidate.ForeignKey(Candidate)
    offer_expire = DateField
    status = CharField
)
```

```
NotInterest (
    job_num: IntegerField
    candidate_username: CharField
)
```

```
Offer (
    app_id: ForeignKey(Application)
    yearly_salary: IntegerField
    expiration_date: DateField
)
```



III. Demonstration of the Features

Feature 1: Sign Up / Sign In

1.1: Create New Candidate Profile



Create Candidate's Account

Full Name
Username
Password
Zip Code
List of Skills
Years of Experience

Register

[Join as Recruiter](#) [Login as Candidate](#)

This screenshot shows the 'Create Candidate's Account' form. It features a blue header with the 'TinDev' logo. Below the header, the form title 'Create Candidate's Account' is displayed. The form consists of six input fields: 'Full Name', 'Username', 'Password', 'Zip Code', 'List of Skills', and 'Years of Experience'. A large blue 'Register' button is positioned at the bottom right of the form area. At the very bottom, there are two small links: 'Join as Recruiter' and 'Login as Candidate'.

1.2: Create New Recruiter Profile



Create Recruiter's Account

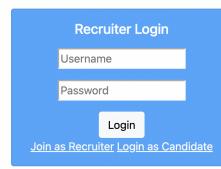
Full Name
Company
Username
Password
Zip Code

Register

[Join as Candidate](#) [Login as Recruiter](#)

This screenshot shows the 'Create Recruiter's Account' form. It has a blue header with the 'TinDev' logo. The form title 'Create Recruiter's Account' is at the top. It includes five input fields: 'Full Name', 'Company', 'Username', 'Password', and 'Zip Code'. A blue 'Register' button is located at the bottom. At the bottom of the page, there are two links: 'Join as Candidate' and 'Login as Recruiter'.

1.3: Log-in

  <p>Candidate Login Username <input type="text"/> Password <input type="password"/> Login Join as Candidate Login as Recruiter</p>	  <p>Recruiter Login Username <input type="text"/> Password <input type="password"/> Login Join as Recruiter Login as Candidate</p>
Candidates' Login Page	Recruiters' Login Page

1.4: Log-out

 HELLO, THBT175! Home Create a Post View Current Posts Update Profile 	Logout on Recruiter's Navigation Bar
 HELLO, TRAMTR! Home Job Board My Applications My Offers Update Profile 	Logout on Candidate's Navigation Bar

The “Logout” feature for recruiters will redirect to the recruiters’ login page while the one for candidates will redirect to the candidates’ login page.

Feature 2: Recruiter's Dashboard

2.1: Recruiter's Home Page



2.2: View Posts

The “View Current Posts” tab will direct to the Active Posts created by the recruiter.

a. Active Posts

A screenshot of the 'View Current Posts' page. At the top left is the 'TinDev' logo. Next to it is a greeting 'HELLO, THBT175!'. A horizontal navigation bar below the greeting includes 'Home', 'Create a Post', 'View Current Posts' (which is underlined), and 'Logout'. Below the navigation bar are three tabs: 'All Posts', 'Active Posts' (which is highlighted in red), and 'Inactive Posts'. The main content area displays three active job posts in separate boxes. Each post includes the position title, company name, skills, status, position type, and three buttons: 'Delete Post', 'Update Post', and 'View Applicants'.

Position	Company	Skills	Status	Type
SWE 1	ABC	python	Active	Full-Time
SWE 1	EFG	C/C++	Active	Full-Time
Full Stack 1	EFG	Django, Python	Active	Full-Time

127.0.0.1:8000/tinDevApp/recruiter/home/thbt175/post/view/active

b. All Posts

TinDev **HELLO, THBT175!**

Home Create a Post [View Current Posts](#) Logout

[All Posts](#) Active Posts Inactive Posts

Position: SWE 2

Company: abc
Skills: abc
Status: Inactive
Position Type: Part-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

Position: SWE 1

Company: ABC
Skills: python
Status: Active
Position Type: Full-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

Position: SWE 1

Company: EFG
Skills: C/C++
Status: Active
Position Type: Full-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

127.0.0.1:8000/TinDevApp/recruiter/home/thbt175/post/view/all

c. Inactive Posts

TinDev **HELLO, THBT175!**

Home Create a Post [View Current Posts](#) Logout

[All Posts](#) Active Posts [Inactive Posts](#)

Position: SWE 2

Company: abc
Skills: abc
Status: Inactive
Position Type: Part-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

2.3: Creating a Post

TinDev **HELLO, THBT175!**

[Home](#) [Create a Post](#) [View Current Posts](#) [Update Profile](#) [Logout](#)

TinDev

Create New Job Post

Position:

Location (City, State):

Company:

List of Skills:

Description:

Expiration Date (yyyy/mm/dd):
2022-12-03

Position Type: Full-Time

Status: Active

[Save](#) [Discard](#)

2.4: Updating a Post

Position: SWE 1

Description: none

Company: ABC

Skills: python

Status: Active

Position Type: Full-Time

[Delete Post](#)

[Update Post](#)

[View Applicants](#)

TinDev

Update Job Post

Position: SWE

Location (City, State): IN

Company: ABC

List of Skills: python

Description: none

Expiration Date (yyyy/mm/dd):

2022-12-31

Position Type: Full-Time ▾

Status: Active ▾

Save

Discard

Position: SWE 1

Description: require to work on TinDev project

Company: ABC

Skills: python, Django

Status: Active

Position Type: Full-Time

[Delete Post](#)[Update Post](#)[View Applicants](#)

2.5: Deleting a Post

Position: SWE 1

Description: require to work on TinDev project

Company: ABC

Skills: python, Django

Status: Active

Position Type: Full-Time

[Delete Post](#)[Update Post](#)[View Applicants](#)

TinDev

HELLO, THBT175!

Home Create a Post [View Current Posts](#) Update Profile Logout

All Posts [Active Posts](#) Inactive Posts

Position: SWE 1

Description: None
Company: EFG
Skills: C/C++
Status: Active
Position Type: Full-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

Position: Full Stack 1

Description: None
Company: EFG
Skills: Django, Python
Status: Active
Position Type: Full-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

The post above was deleted and removed from the dashboard.

2.6: View Interested Applicants and Their Compatibility Scores

Position: SWE 1

Description: None
Company: EFG
Skills: C/C++
Status: Active
Position Type: Full-Time

[Delete Post](#) [Update Post](#) [View Applicants](#)

View the list of applicants for the post

The screenshot shows a web application interface for managing job applications. At the top, there is a header with the logo "TinDev" and the greeting "HELLO, THBT175!". Below the header, there are navigation links: Home, Create a Post, View Current Posts (which is underlined), Update Profile, Logout, All Posts, Active Posts, and Inactive Posts.

The main content area is titled "Applicants for EFG's SWE Position". It displays two application cards:

- Name: Tram Trinh**
Years: 1
Skills: abc
Compatibility Scores: 0%
Status: Accepted
[Remove Application](#)
- Name: Hoai Trinh**
Years: 1
Skills: C/C++
Compatibility Scores: 100%
Status: Applied/Pending
[Remove Application](#)

Below these cards is a form titled "Extend Offer" with the following fields:
 Hoai Trinh
Yearly Salary:
Expiration date: Expiration Date

[Save](#)

2.7: Extend Offer or Remove Application (Reject Candidate)

a. Extend Offer

Extend Offer

Hoai Trinh

Yearly Salary:

Expiration date:

Save

Name: Hoai Trinh

Years: 1

Skills: C/C++

Compatibility Scores: 100%

Status: Offer Extended

Remove Application

b. Reject Application

Name: Hoai Trinh

Years: 1

Skills: C/C++

Compatibility Scores: 0%

Status: Applied/Pending

[Remove Application](#) TinDev**HELLO, THBT175!**[Home](#) [Create a Post](#) [View Current Posts](#) [Update Profile](#) [Logout](#)**Candidate Removed!****Name: Hoai Trinh**

Years: 1

Skills: C/C++

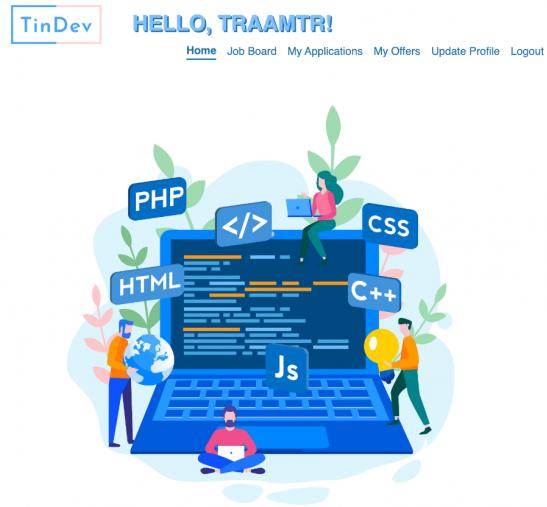
Compatibility Scores: 0%

Status: Rejected

[Remove Application](#)

Feature 3: Candidate's Dashboard

3.1: Candidate's Home Page



3.2: View Job Postings and 3.3: Demonstrating interest / not interested in a job

A screenshot of the 'Job Board' section of the TinDev candidate dashboard. The top navigation bar includes the 'TinDev' logo, 'Hello, TRAMTR!', and the 'Job Board' link. Below the navigation are three search input fields: 'All Posts' (highlighted in red), 'Active Posts', and 'Inactive Posts'. Further down are two search boxes: 'Search Descriptions...' and 'Search Zip Codes...'. The main content displays three job postings in cards:

- Position: CEO (4)**
Description: We need a CEO!
Company: Amazon
Skills: Hard Worker
Status: Active
Position Type: Full-Time
[Apply](#) [Not Interested](#)
- Position: Dog Walker (3)**
Description: Walk my Dog
Company: Amazon
Skills: Walking
Status: Active
Position Type: Full-Time
[Apply](#) [Not Interested](#)
- Position: Cat Walker (2)**
Description: Walk my Cat
Company: Amazon

3.4: View Offers and 3.5: Accepting/Declining Offers



IV. Project's Learned Lessons

1. What programming paradigm(s) have you chosen to use and why? If you were to start the project from scratch now, would you make different choices? Do you think the paradigm(s) chosen helped (or not) in developing the project?
 - a. One of the biggest paradigms used in this project was object-oriented programming. With all the parts of the candidate, application, offer, and recruiter, being able to divide each of these different parts into more organized groups of code was really important to the overall flow of our code. Specifically, with the candidate and the recruiter, having both classes was really crucial to making sure that each group could edit specific parts of the website that the other group should be able to change (making a post, offers). However, while our group did use the attribute side of classes extensively, potentially adding more methods to each class could have made the code more organized. There are times in our program when the same code is repeated in multiple functions, so having the abstraction of methods in each class would have helped to organize the code and make it easier to understand.
2. What were the most intellectually challenging aspects of the project?
 - a. One of the most intellectually challenging aspects of the project was getting the input from the user. This was a crucial step to the project, as we needed to code in order to allow new users to create new profiles and properly use all the necessary

functions of the project. Initially, our group approached the problem with js code. The idea was that the code would initially be parsed in an html using a js file, and this js program would also write a text file that would be then read in by the python files of django. However, since django is a server, it made this process near impossible and impractical since this solution could be broken by multiple users accessing the site at the same time. Instead, our group shifted our focus into using django templates and forms in order to receive input from users.

3. What aspects of your process or your group's organization had the largest positive effect on the project's outcome?
 - a. Communication was one of the biggest aspects of our group that made the project so much more successful and efficient. Initially, communication was really useful in order to plan meetings and to meet as a team. However, afterwards communication became a means of asking for help and distributing work. By always communicating with each other about the work we were planning to do or were doing, it helped everyone else on the team to organize their own schedules and plan accordingly. Ultimately, communication helped to make work far more efficient, and it made the process of the code much less stressful.