Applicant Tracking System Prototype

1. Project Overview

This project is a simple prototype of an Applicant Tracking Dashboard designed to demonstrate frontend skills, data handling, and basic database design.

The system allows the user to:

- Add applicants using a simple form
- Store applicant data locally
- Display applicants in a table view

This prototype focuses on simplicity and clarity and does not require backend integration.

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2. Technologies Used

- HTML
- CSS
- JavaScript (Local Storage for data persistence)

This project does not require any frameworks or backend environment.

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3. How the Solution Works

3.1 Frontend

The user fills in:

- Name
- Email
- City
- Skills

When the user clicks **Save Applicant**:

1. Data is validated and captured using JavaScript.
2. The data is saved in Local Storage.
3. The applicant table is updated automatically.

3.2 Data Persistence

Local Storage is used instead of a database for simplicity:

- Data remains saved even after page refresh
- No server or database setup is required

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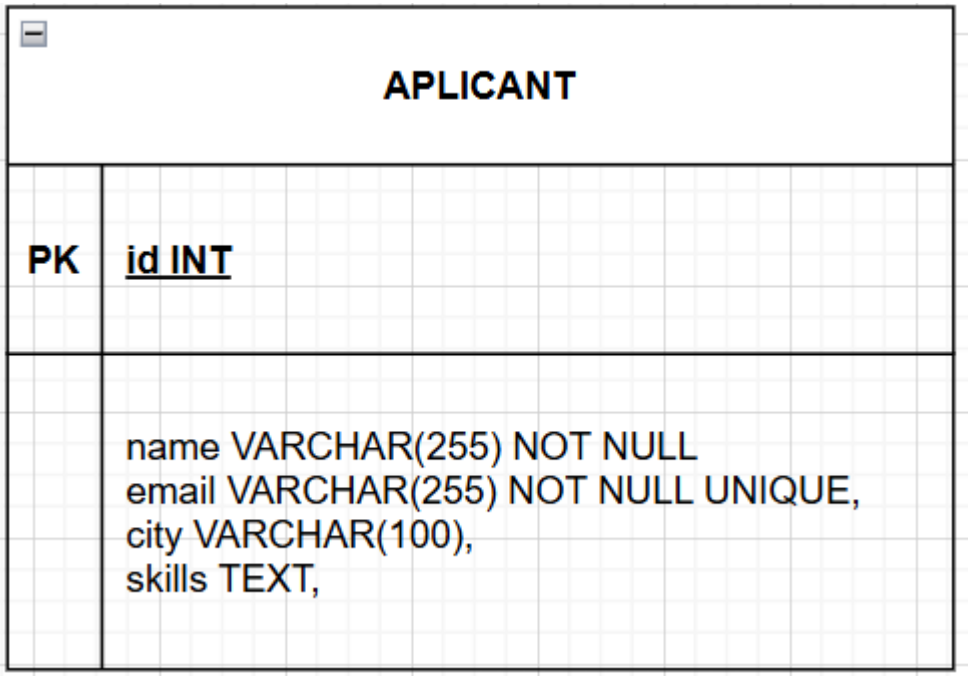
4. ERD (Database Diagram)

Since this is a simple prototype, the design contains a single table:



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5. SQL Implementation

Even though the project uses Local Storage, SQL commands are provided to represent a real database implementation.

5.1 Create Table

```
CREATE TABLE applicants (
  id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(255) NOT NULL,
  email VARCHAR(255) NOT NULL UNIQUE,
  city VARCHAR(100),
  skills TEXT,
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP
);
```

5.2 Select All Applicants

```
SELECT * FROM applicants ORDER BY created_at DESC;
```

id	name	email	city	skills	created_at
1	أحمد علي	ahmed@example.com	الرياض	JavaScript, Python, MySQL	2025-11-26 23:10:21
2	فاطمة محمد	fatima@example.com	جدة	JavaScript, React, HTML	2025-11-26 23:10:21
3	محمود سالم	mahmoud@example.com	الدمام	Python, Django, PostgreSQL	2025-11-26 23:10:21
4	نور خالد	noor@example.com	الرياض	JavaScript, Vue.js, CSS	2025-11-26 23:10:21
5	ليلى أحمد	layla@example.com	مكة	Java, Spring Boot, MySQL	2025-11-26 23:10:21
NULL	NULL	NULL	NULL	NULL	NULL

5.3 Filter by Skill

```
SELECT * FROM applicants WHERE skills LIKE '%JavaScript%';
```

id	name	email	city	skills	created_at
1	أحمد علي	ahmed@example.com	الرياض	JavaScript, Python, MySQL	2025-11-26 23:10:21
2	فاطمة محمد	fatima@example.com	جدة	JavaScript, React, HTML	2025-11-26 23:10:21
4	نور خالد	noor@example.com	الرياض	JavaScript, Vue.js, CSS	2025-11-26 23:10:21
NULL	NULL	NULL	NULL	NULL	NULL

5.4 Count Applicants by City

```
SELECT city, COUNT(*) AS applicants_count
FROM applicants
GROUP BY city
ORDER BY applicants count DESC;
```

city	applicants_count
الرياض	2
جدة	1
الدمام	1
مكة	1

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6. Challenges and Solutions

Challenge: Data Persistence

There was no backend available for database connectivity.

Solution: Local Storage was used to simulate data saving.

Challenge: Keeping UI updated

Updating the table after every submission.

Solution: Implemented a reusable `render()` function to refresh the UI.

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7. Improvements for the Future

Given more time, the following features could be added:

- Search and filter applicants
- Remove and edit applicants
- Backend API integration with MySQL
- Responsive UI styling
- Authentication for admin users
- Add more features using PHP

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8. Conclusion

This prototype demonstrates the essential features of an applicant tracking system using only frontend technologies and Local Storage. SQL scripts and ERD are included to show how the same project could scale using a real database.

GitHub link :

https://github.com/sawsan-omar/Applicant-tracking-dashboard1.git