# World of Speed App - Django Basics Regular Exam 24 February 2024

*The app allows the user to browse different racing cars, and see their details (including their price, category, year, type, and model). The user can create, edit, or delete cars at any time. Users can also edit or delete their profiles.*

## 1. Skeleton

All essential **HTML** pages, **images**, and **CSS** resources for the project have been provided to you.

## 2. Structure

Establish a well-organized project structure by initiating a **minimum** of **two** Django **apps** and configuring the **corresponding URLs**.

You have the flexibility to utilize **both** **Function-Based Views** and **Class-Based Views** as needed.

Adhere to best practices and uphold the separation of concerns principle for a robust and maintainable codebase.

If there are **no explicitly** **defined** requirements for formatting or additional functionalities, it implies that **you** **are** **not obligated** to **implement** **them** unless you have ample time and wish to enhance your project. However, **ensure** that you **fully satisfy** **all explicitly defined** ones.

## 3. Database

You will need to create **two models**:

* **Profile**
  + **Username**
    - Character field, **required**.
    - It should consist of a **maximum of 15 characters**.
    - It should consist of a **minimum of 3 characters.**
      * Error message: **"Username must be at least 3 chars long!".**
    - It should contain only **letters**, **digits**, **and underscores**.
      * Error message: **"Username must contain only letters, digits, and underscores!"**
  + **Email**
    - Email field, **required**.
  + **Age**
    - Integer field, **required**.
    - The age **cannot be below 21**.
    - Help text: **"Age requirement: 21 years and above."**
  + **Password**
    - Character (password) field, **required**.
    - It should consist of a **maximum of 20 characters**.
  + **First** **Name**
    - Character field, **optional**.
    - It should consist of a **maximum of 25 characters**.
  + **Last** **Name**
    - Character field, **optional**.
    - It should consist of a **maximum of 25 characters**.
  + **Profile** **Picture**
    - URL field, **optional**.
* **Car**
  + **Type**
    - Character (choice) field, **required**.
    - It should consist of a **maximum of 10 characters**.
    - The choices are **"Rally"**, **"Open-wheel"**, **"Kart"**, **"Drag"** and **"Other"**.
  + **Model**
    - Character field, **required**.
    - It should consist of a **maximum of 15 characters**.
    - It should consist of a **minimum of 1 characters**.
  + **Year**
    - Integer field, **required**.
    - Valid year is a year between **1999** and **2030** (both inclusive). Otherwise, raise a **ValidationError** with the message: **"Year must be between 1999 and 2030!"**
  + **Image** **URL**
    - URL field, **required**, **unique**.
    - A placeholder: **"https://..."**
    - A custom **error message** for **unique** constraint: **"This image URL is already in use! Provide a new one."**
  + **Price**
    - Float field, **required**.
    - Price **cannot be below 1.0**.
  + **Owner**
    - A **foreign key** to the **Profile** model.
    - Establishes a **many-to-one** relationship with the **Profile** model, associating each car with a profile.
    - The **ON DELETE** constraint must be **configured** to an **appropriate value** in alignment with the specified **additional tasks**.
    - This field should remain **hidden** in forms.

**Note: Validations will be assessed solely on the user side, with no evaluation from the Admin site.**

## 4. Routes

* <http://localhost:8000/> - Index page
* <http://localhost:8000/car/catalogue/> - Catalogue page
* [http://localhost:8000/car/create/](http://localhost:8000/game/create/) - Car create page
* [http://localhost:8000/car/<id>/details/](http://localhost:8000/car/%3cid%3e/details/) - Car details page
* [http://localhost:8000/car/<id>/edit/](http://localhost:8000/car/%3cid%3e/edit/) - Car edit page
* [http://localhost:8000/car/<id>/delete/](http://localhost:8000/car/%3cid%3e/delete/) - Car delete page
* <http://localhost:8000/profile/create> - Profile create page
* <http://localhost:8000/profile/details/> - Profile details page
* <http://localhost:8000/profile/edit/> - Profile edit page
* <http://localhost:8000/profile/delete/> - Profile delete page

## 5. Pages

### Base Template - 10p

**Template file**: **"base.html"**

Create a **base template** to be **inherited** by all other templates in the project. This base template should encompass project **metadata** within the <head> tag, along with a consistent **navigation bar** and **footer** for every web page.

**Navigation bar**:

* **"World of Speed"** link, which leads to the **Index** page.
* **"Create Profile"** link, which leads to the **Create profile** page.
* **"Catalogue"** link, which leads to the **Catalogue** page.
* **"Create Car"** link, which leads to the **Create car** page.
* **"Profile"** link, which leads to the **Profile details** page.

Note that the **"Catalogue"**, **"Create Car"**, and **"Profile"** links on the navigation bar are **only visible** when the user **has** a **profile**, while the **"Create Profile"** link is **visible** **only** if the user has **NOT created** a **profile** yet.

This template lacks a direct path and is **inaccessible** via **URL**.

### Index Page - 5p

**Template file**: **"index.html"**

The page displays:

* A **navigation bar** as described above.
* A **headline**: **"Welcome to the world of speed!"**.
* A **default image**.
* A **footer**.

The **"Create Profile"** link on the navigation bar is **only visible** when the user **has NOT created** a **profile** yet:

A screenshot of a computer

Description automatically generated

The **"Catalogue"**, **"Create Car"**, and **"Profile"** links on the navigation bar are **only visible** when the user **has a profile:**

A screenshot of a computer

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### Profile Create Page - 10p

**Template file**: **"profile-create.html"**

The page displays:

* A **navigation bar**:
* **"World of Speed"** link, which leads to the **index** page.
* **"Create Profile"** link, which leads to **create profile** page.
* A **profile** **creation form**:
* An **"Username:"** field
* An **"Email:"** field
* An **"Age:"** field with a help text**: "Age requirement: 21 years and above."**
* A **"Password:"** field
* Utilize a suitable **widget** to **mask** **characters** for enhanced **security** and **privacy**.
* A button **"Create Profile"**
* Upon **clicking** on it, **if** the profile is **successfully created**, you should be redirected to the **Catalogue page**.
* Otherwise, the form should display the **relevant validation errors**.

A screenshot of a login form

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### Car Create Page - 10p

Template file: **"car-create.html"**

The page displays:

* A **navigation bar,** as shown below.
* A **car** **creation form**:
* A **"Type:"** field
* A **"Model:"** field
* An **"Year:"** field
* An **"Image URL:"** field with a placeholder: **"https://..."**
* A **"Price:"** field
* A button **"Create Car"**
* Upon **clicking** on it, **if** the car is **successfully created**, you should be **redirected** to the **Catalogue page**.
* Otherwise, the form should display the **relevant validation errors**.
* **Associate** the new **car** with the user **profile** you already have in the database.

A screenshot of a computer

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### Catalogue Page - 10p

**Template file**: **"catalogue.html"**

The **catalogue** page **displays all cars** that have been **created** and **stored** in the **database**.

If the **user** **has** a **profile**, but there are **no cars created yet**, the page should display the following:

* A navigation bar, as shown below.
* A paragraph "**No cars yet**"

A blue screen with white text

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If the **user** **has** a **profile** and there are **cars** in the **database,** the page should display the following:

* A navigation bar, as shown below.
* The total **number of cars**.
* A **card** for each **car**, displaying:
* The car's **image**
* The car's **type**
* The car's **model**
* A **button** **"Details"** leading to the **Car details page** for the selected car

A screenshot of a game

Description automatically generated

### Car Details Page - 10p

Template file: **"car-details.html"**

This page displays the **selected** **car** information. It should have the following:

* The **car's image**
* The **car's type**
* The **car's model**
* The **car's year**
* The **car's price**, **formatted** to the **3rd decimal place**
* An **"Edit"** button that leads to the **Edit car page**
* A **"Delete"** button that leads to the **Delete car page**

A screenshot of a car

Description automatically generated

### Car Edit Page - 10p

Template file: **"car-edit.html"**

On the page, the form should be **pre-filled** with the data of the **selected car** for editing.

When you click on the **"Edit Car"** button:

* **If** the car is **successfully edited**,you should be redirected to the **Catalogue** **page**.
* **Otherwise**, the form should display the **relevant validation errors**.

A screenshot of a computer

Description automatically generated

### Car Delete Page - 10p

Template file: **"car-delete.html"**

On the page, the form should be **pre-filled** with the data of the **selected car** for **deleting.**

**All fields** should be **read-only**.

Upon clicking on the **"Delete Car"** button, the **car** is **deleted** from the **database**, and you should be **redirected** to the **Catalogue page**.

The deleted car should be **no longer visible** in the app.

A screenshot of a computer

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### Profile Details Page - 10p

Template file: **"profile-details.html"**

This page displays the **user's information**. It should have the following:

* A **profile** **picture**
  + If **no picture is provided** by the user, the page should display a **default profile picture** (in the static/images folder)
* A **full** **name**
* If **both names** are entered, show them separated by a **single** **space**
* If **only** one of the names is provided (**first name** or **last name)**, display the **entered one only**
* Otherwise, ignore the line (**do not show** anything)
* The **username**
* The **email**
* The **age**
* The **total price of all cars** that the **user** has **created**, **formatted** to the **3rd decimal** place
* An **"Edit"** button that leads to the **Profile edit page**
* A **"Delete"** button that leads to the **Profile delete page**

A screenshot of a profile

Description automatically generated

### Profile Edit Page - 10p

Template file: **"profile-edit.html"**

On the page, the **form** should be **pre-filled** with the data of the **selected** **profile** for **editing**.

The **password** could be **visible or hidden**.

The profile **editing form** has **additional fields**:

* A **"First Name:"** field
* A **"Last Name:"** field
* A **"Profile Picture:"** field

Upon clicking on the **"Edit Profile"** button:

* **If** the profile is **successfully edited**,you should be **redirected** to the **Profile details page**.
* Otherwise, the **form** should display the **relevant validation errors**.

A screenshot of a computer

Description automatically generated

### Profile Delete Page - 5p

Template file: **"profile-delete.html"**

**Deleting** the **profile** should **delete** the **profile info** and **all** of the **cars** that are **associated** with that **profile**.

After **deletion**, the user should be **redirected** to the **Index page**.

A screenshot of a computer

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