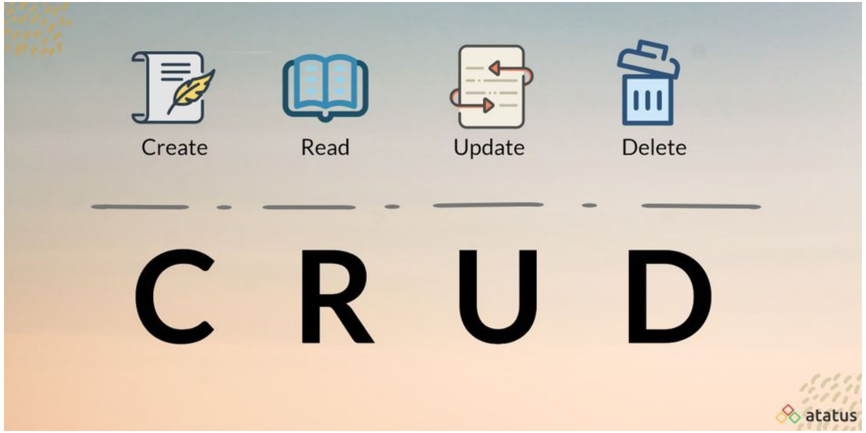
CRUD



What are **CRUD** functionalities?

CRUD is an acronym that comes from the world of computer programming and refers to the four functions that are considered necessary to implement a persistent storage application: **create, read, update and delete**.

Create

The create function allows users to create a new record in the database.

Read

The read function is similar to a search function. It allows users to search and retrieve specific records in the table and read their values. Users may be able to find desired records using keywords, or by filtering the data based on customized criteria. For example, a database of movies might enable users to type in "Indiana Jones," or it might provide options to filter search results by genre, director and year.

Update

The update function is used to modify existing records that exist in the database. To fully change a record, users may have to modify information in multiple fields. For example, a restaurant that stores recipes for menu items in a database might have a table whose attributes are "dish," "cooking time," "cost" and "price." One day, the chef decides to replace an ingredient in the dish with something different. As a result, the existing record in the database must be changed and all of the attribute values changed to reflect the characteristics of the new dish.

Delete

As the term suggests, the delete function allows users to remove records from a database that is no longer needed. Ideally, we would give users a warning before they delete.

Are you sure you want to delete this item? This cannot be undone.

Continue ✓ Cancel ⓧ

CRUD Applications:

CRUD operations are widely used in many applications that are supported by underlying relational databases. These four basic CRUD functions are incredibly versatile in how they can support a variety of important functions across different business models and industry verticals. Eg:

- An HR Data Table that includes the employee's payroll information, social security number, employee ID and salary.

When a new employee is hired, someone new is added to the payroll, or the company acquires a new location, the HR department **creates** a record to reflect the changes. If the business needs to send a letter to one or more employees, the **read** function might be used to find the correct mailing address for the employee. If an employee's salary or contact information changes, the HR department may need to **update** the existing record to reflect the change.

If an employee leaves the company, the company may choose to perform a soft or hard **delete** of their information in the database. Here, a soft delete might be appropriate as the organization wishes to retain data on the individual without cluttering up future searches or filtered results

CRUD & the User Interface

Data can be put in a *location/area* of a storage mechanism.

- The fundamental feature of a storage location is that its *content* is both *readable* and *updatable*.
- Before a storage location can be read or updated it needs to be *created*; that is allocated and initialized with content.
- At some later point, the storage location may need to be *destructed*; that is finalized and deallocated.

Together these four operations make up the basic operations of storage management known as CRUD: *Create*, *Read*, *Update* and *Delete*.

CRUD is also relevant at the user interface level of most applications. For example, in address book software, the basic storage unit is an individual *contact entry*. As a bare minimum, the software must allow the user to:

- *Create*, or add new entries
- *Read*, retrieve, search, or view existing entries
- *Update*, or edit existing entries
- *Delete*, deactivate, or remove existing entries

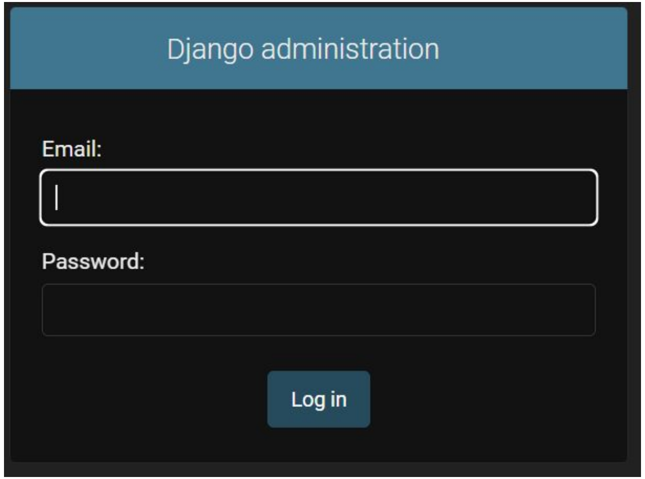
Django Admin Panel

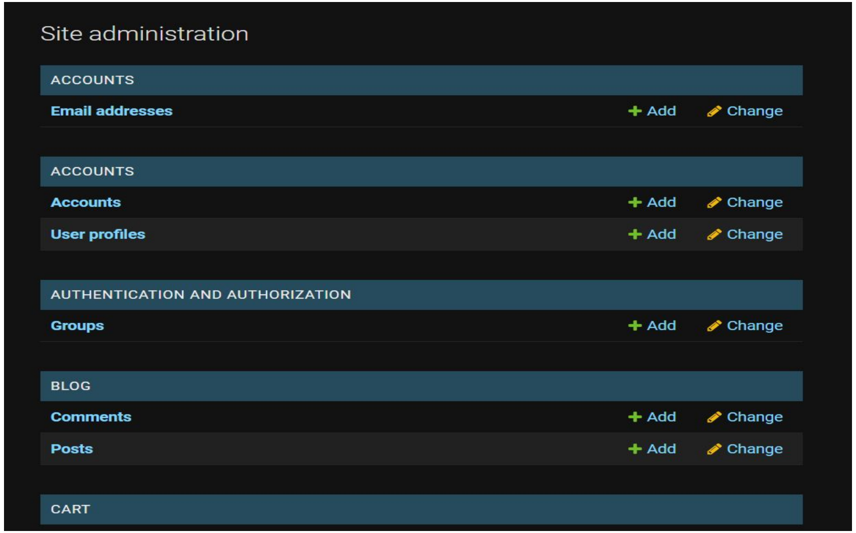
Django provides an admin site to allow CRUD (*Create Read Update Delete*) operations on registered app model.

It is a built-in feature of Django that automatically generates interface for models.

To log in to this admin panel, first create a *superuser* - a user and password

Once logged in you will see a home page appear.





Site administration

ACCOUNTS		
Email addresses	+ Add	Change

ACCOUNTS		
Accounts	+ Add	Change
User profiles	+ Add	Change

AUTHENTICATION AND AUTHORIZATION		
Groups	+ Add	Change

BLOG		
Comments	+ Add	Change
Posts	+ Add	Change

CART

CRUD & the User Interface

- A million ways to CRUD Part 1
- A million ways to CRUD Pt 2