

Fast API

- ⇒ It is nothing but a framework for building APIs [Application program interface]
- ⇒ It is very fast and high performance on par with Node.js
- ⇒ One of the fastest frameworks available in python

It is just a framework for building API, in order to serve our API we need a server.

- ⇒ We use "uvicorn" ASGI (asynchronous gateway interface) server
↓
a Http server

First Fast API program

```
from fastapi import FastAPI
```

⇒ This will be our main.py

```
app = FastAPI()
```

```
@app.get("/")
```

→ Route for the get request, giving in a path

```
def root():
```

```
    return {"Hello": "World"}
```

⇒ To execute this run this in terminal

```
uvicorn main:app --reload
```

Server reloads automatically

→ If we make changes to

the instances we've defined

name of our module

In the same directory
as our main.py

This gives you a localhost link, by pasting it in
the browser you can see the output

```
{"Hello": "World"}
```

* And this localhost link has the route you have given it i.e.

last ex: 127.0.0.1:8000/

↓
route we've given

HTTP request methods:

HTTP defines a set of request methods to indicate the desired action to be performed for a given resource. Each of them implements a different semantic.

ex: GET → should only retrieve data

HEAD → identical to get but without a response body

POST → submits an entity to the specified resource

PUT etc...

Post required

Using pydantic

pydantic is a python library to perform data validation

(we can declare shape of our data as classes with attributes)

```
from pydantic import BaseModel
from typing import Optional, List
from uuid import UUID, uuid4
from enum import Enum

class User(BaseModel):
    id: Optional[UUID] = uuid4()
    first_name: str
    last_name: str
    middle_name: Optional[str]
    gender: Gender
    roles: List[Role]

class Gender(str, Enum):
    male = "male"
    female = "female"

class Role(str, Enum):
    admin = "admin"
    user = "user"
    student = "student"
```

⇒ pydantic_models.py

Building database to store our users

go to our main.py

from uuid import uuid4, ~~Gender~~

from pydantic_models import User, Gender, Role

```
db: List[User] = [
    User(
        id = uuid4()
        first_name = krishna
        last_name = Sai
        gender = Gender.female
        roles = [Role.student]
    )
]
```

