

```
pip install fastapi uvicorn motor
```

```
from fastapi import FastAPI,  
HTTPException  
from pydantic import BaseModel  
from typing import List  
import motor.motor_asyncio as aiomotor  
  
app = FastAPI()  
  
# Connect to MongoDB  
client =  
aiomotor.AsyncIOMotorClient("mongodb://  
localhost:27017")  
db = client.my_database  
users_collection = db.users  
  
class User(BaseModel):  
    name: str  
    age: int  
  
@app.post("/users/",
```

```
response_model=User)
async def create_user(user: User):
    user_dict = user.dict()
    result = await
users_collection.insert_one(user_dict)
    user_dict["id"] = str(result.inserted_id)
    return user_dict
```

```
@app.get("/users/",
response_model=List[User])
async def read_users():
    cursor = users_collection.find()
    users = []
    async for user in cursor:
        user["id"] = str(user["_id"])
        del user["_id"]
        users.append(user)
    return users
```

```
@app.get("/users/{user_id}",
response_model=User)
async def read_user(user_id: str):
    user = await
```

```
users_collection.find_one({"_id": user_id})
    if user:
        user["id"] = user_id
        del user["_id"]
        return user
    else:
        raise
HTTPException(status_code=404,
detail="User not found")
```

```
@app.put("/users/{user_id}",
response_model=User)
async def update_user(user_id: str, user:
User):
    result = await
users_collection.replace_one({"_id":
user_id}, user.dict())
    if result.matched_count == 1:
        return user
    else:
        raise
HTTPException(status_code=404,
detail="User not found")
```

```
@app.delete("/users/{user_id}")
async def delete_user(user_id: str):
    result = await
users_collection.delete_one({"_id": user_id})
    if result.deleted_count == 1:
        return {"detail": "User deleted"}
    else:
        raise
HTTPException(status_code=404,
detail="User not found")
```

This code creates a FastAPI application with five endpoints:

- `/users/`: Creates a new user.
- `/users/`: Returns a list of all users.
- `/users/{user_id}`: Returns a single user by ID.

- `/users/{user_id}`: Updates a single user by ID.
- `/users/{user_id}`: Deletes a single user by ID.

To run the application, use the following command:

bash :

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

This will start a local server on `http://127.0.0.1:8000/` where you can test the API using a tool like Postman or curl.

