

You can use following libraries

1. <https://github.com/actix/actix-web> ( For HTTP Server)
2. <https://github.com/Keats/jsonwebtoken> ( For authentication)
3. <https://github.com/diesel-rs/diesel> ( For database , please use postgresql database)
4. <https://github.com/serde-rs/json> ( json serialization/deserialization)
5. <https://github.com/tokio-rs/tokio> ( for non blocking operation)
6. <https://github.com/uuid-rs/uuid> ( For generating uuids )
7. You can use any other libraries as well for other purposes

## Table Schemas

### User Table

Field	DataType	Note
user_id	uuid	Primary key
first_name	Varchar 255	Not null
last_name	Varchar 255	Not null
email	Varchar 255	Not null
password	Varchar 255	Not null
created_at	Timestamp	Not null (Store it in UTC)

### Order table

Field	DataType	Note
order_id	uuid	Primary key
user_id	uuid	FK
note	Varchar 500	Can be null
created_at	Timestamp	Not null (Store it in UTC)

## OrderItem

Field	DataType	Note
item_id	uuid	Primary Key
order_id	uuid	Foreign Key
description	Varchar 255	NOT NULL
qty	numeric	NOT NULL, Can't be negative
price	numeric	NOT null, can't be negative
created_at	Timestamp	Not null (Store it in UTC)

### 1. Create a registration endpoint

URL	/api/v1/auth/register
HTTP METHOD	post
Content Type	application/json
Authentication	Not required
Request data	<pre>{   "first_name": "first_name",   "last_name": "last_name",   "email": "",   "password": "" }</pre>
Response type	application/json
Response data	<pre>{   "token": "jsonwebtoken" }</pre>

<b>Note:</b>	<b>Does not allow users to create account with already used email</b>
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## 2. Create a login endpoint

<b>URL</b>	<b>/api/v1/auth/login</b>
<b>HTTP METHOD</b>	<b>post</b>
<b>Content Type</b>	<b>application/json</b>
<b>Authentication</b>	<b>Not required</b>
<b>Request data</b>	<pre>{   "email": "",   "password": "" }</pre>
<b>Response type</b>	<b>application/json</b>
<b>Response data</b>	<pre>{   "token": "jsonwebtoken" }</pre>

### 3. Create a Order endpoint

<b>URL</b>	<b>/api/v1/orders</b>
<b>HTTP METHOD</b>	<b>post</b>
<b>Content Type</b>	<b>application/json</b>
<b>Authentication</b>	<b>Required</b>
<b>Request data</b>	<pre>{   "note": "",   "Items": [     {       "Description": "",       "Qty": 11,       "Price": 30     },     {       "Description": "",       "Qty": 11,       "Price": 30     },     {       "Description": "",       "Qty": 11,       "Price": 30     }   ] }</pre>
<b>Response type</b>	HTTP Empty 200 on success or respected error code in case of any issues

#### 4. Get orders of a user endpoint

<b>URL</b>	<b>/api/v1/orders</b>
<b>HTTP METHOD</b>	<b>get</b>
<b>Content Type</b>	<b>application/json</b>
<b>Authentication</b>	<b>Required</b>
<b>Response data</b>	<pre>[   {     "order_id" : "uuid",     "user_id" : "uuid",     "note" : "",     "order_total" : number,     "Order_at" : timestamp   },   {     "order_id" : "uuid",     "user_id" : "uuid",     "note" : "",     "order_total" : number,     "Order_at" : timestamp   },   {     "order_id" : "uuid",     "user_id" : "uuid",     "note" : "",     "order_total" : number,     "Order_at" : timestamp   } ]</pre>
<b>Response type</b>	<b>application/json</b>

#### 4. Get order detail endpoint

<b>URL</b>	<code>/api/v1/orders/{order_id}</code>
<b>HTTP METHOD</b>	<code>get</code>
<b>Content Type</b>	<code>application/json</code>
<b>Authentication</b>	<b>Required</b>
<b>Response data</b>	<pre>{   "order_id" : "uuid",   "user_id" : "uuid",   "note" : "",   "order_total" : number,   "Order_at" : timestamp,   "Items" : [     {       "Item_id" : "uuid",       "Description" : "",       "Qty" : 11,       "Price" : 30     },     {       "Item_id" : "uuid",       "Description" : "",       "Qty" : 11,       "Price" : 30     },     {       "Item_id" : "uuid",       "Description" : "",       "Qty" : 11,       "Price" : 30     }   ] }</pre>
<b>Response type</b>	<code>application/json</code>

<b>Note</b>	Only allow to access user's own order not others
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