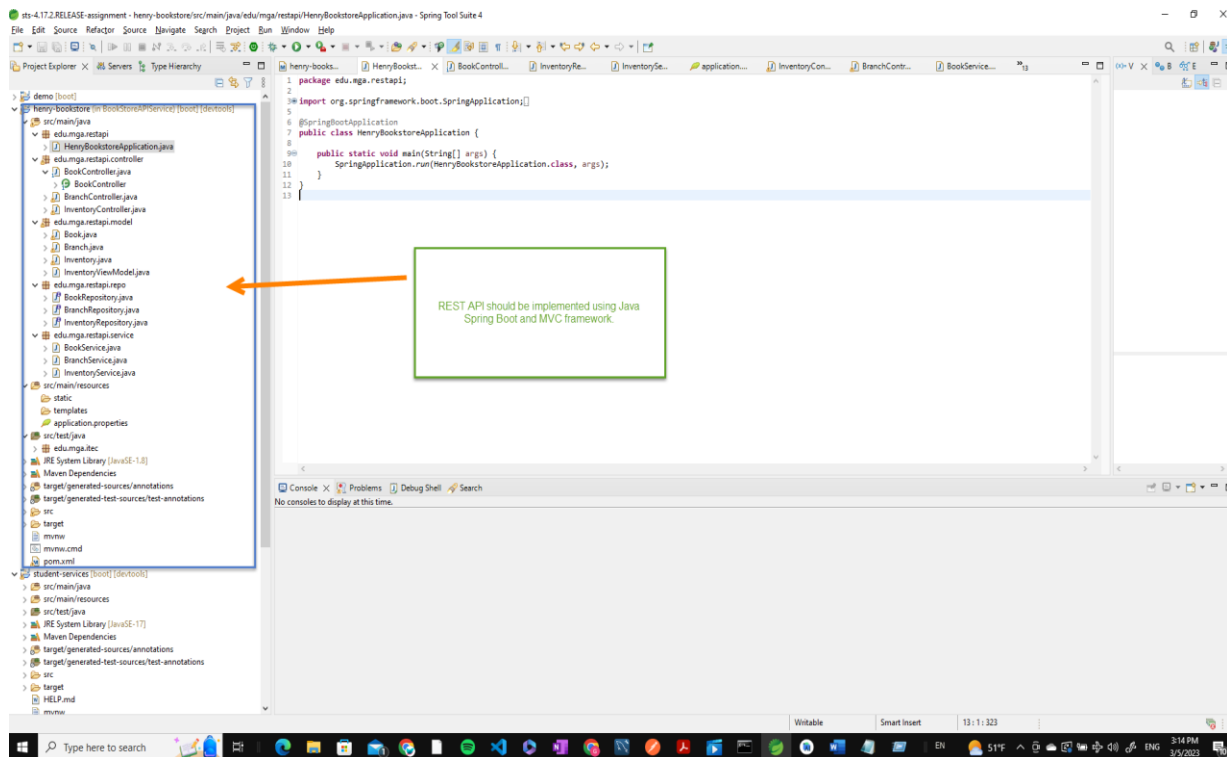
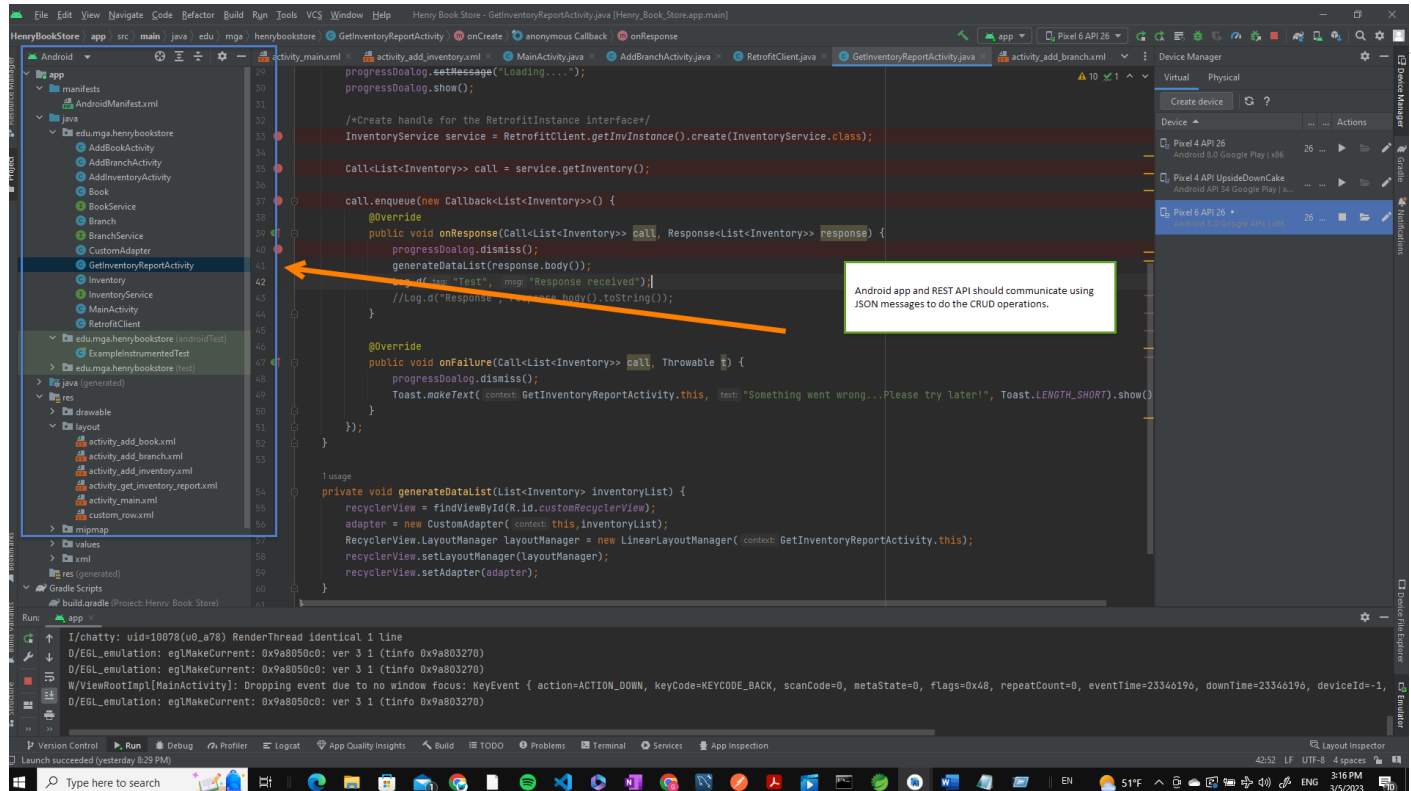


- ✓ REST API should be implemented using Java Spring Boot and MVC framework.



- ✓ Android app and REST API should communicate using JSON messages to do the CRUD operations.



- ✓ Created Google Cloud VM Instances to run API and for MySQL Database
(Assignment task: REST API should run on a Google or other Cloud VM instance.)

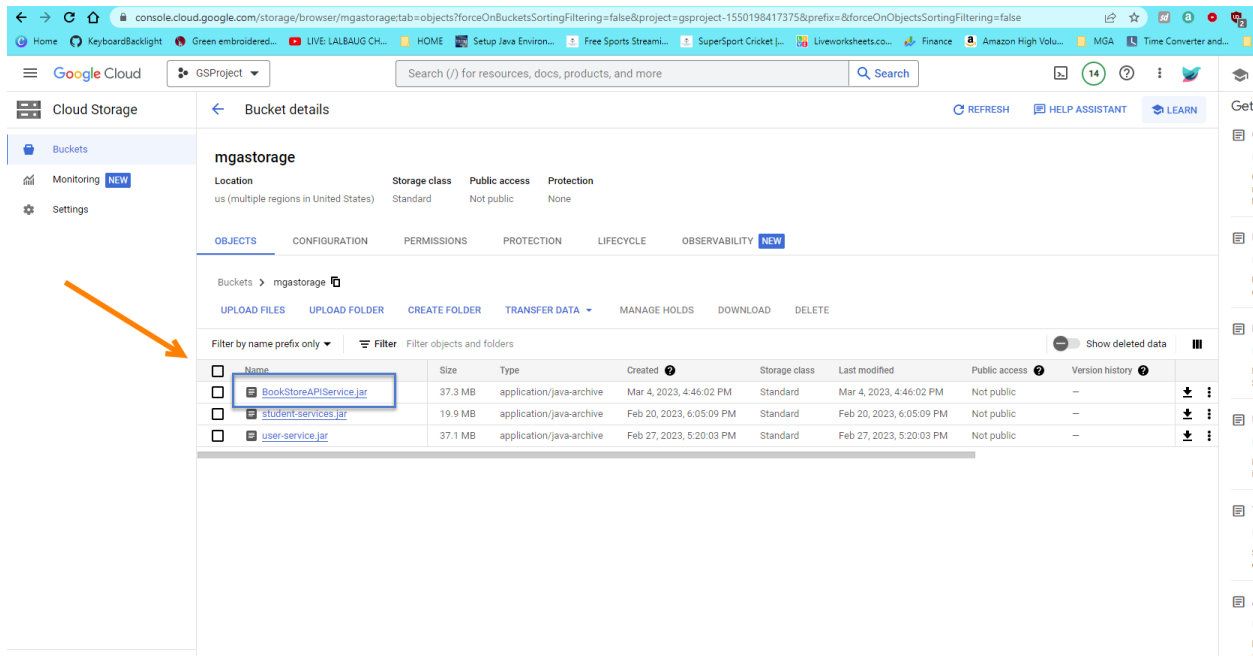
The screenshot shows the Google Cloud Platform interface for project "GSPProject". The left sidebar contains a navigation menu with categories like Virtual machines, Storage, Instance groups, VM Manager, and Bare Metal Solution. The "VM instances" link is selected. The main content area displays a table of VM instances. Two instances are listed: "mysql-server" and "sprintboot-test", both in the "us-west1-b" zone. The "mysql-server" instance has an internal IP of 10.138.0.5 and the "sprintboot-test" instance has an internal IP of 10.138.0.2. Both instances are in the "Running" state. Below the table, there is a "Related actions" section. A notification banner at the bottom states: "Now viewing project 'GSPProject' in organization 'No organization'".

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
Running	mysql-server	us-west1-b			10.138.0.5 (nic0)		SSH
Running	sprintboot-test	us-west1-b			10.138.0.2 (nic0)		SSH

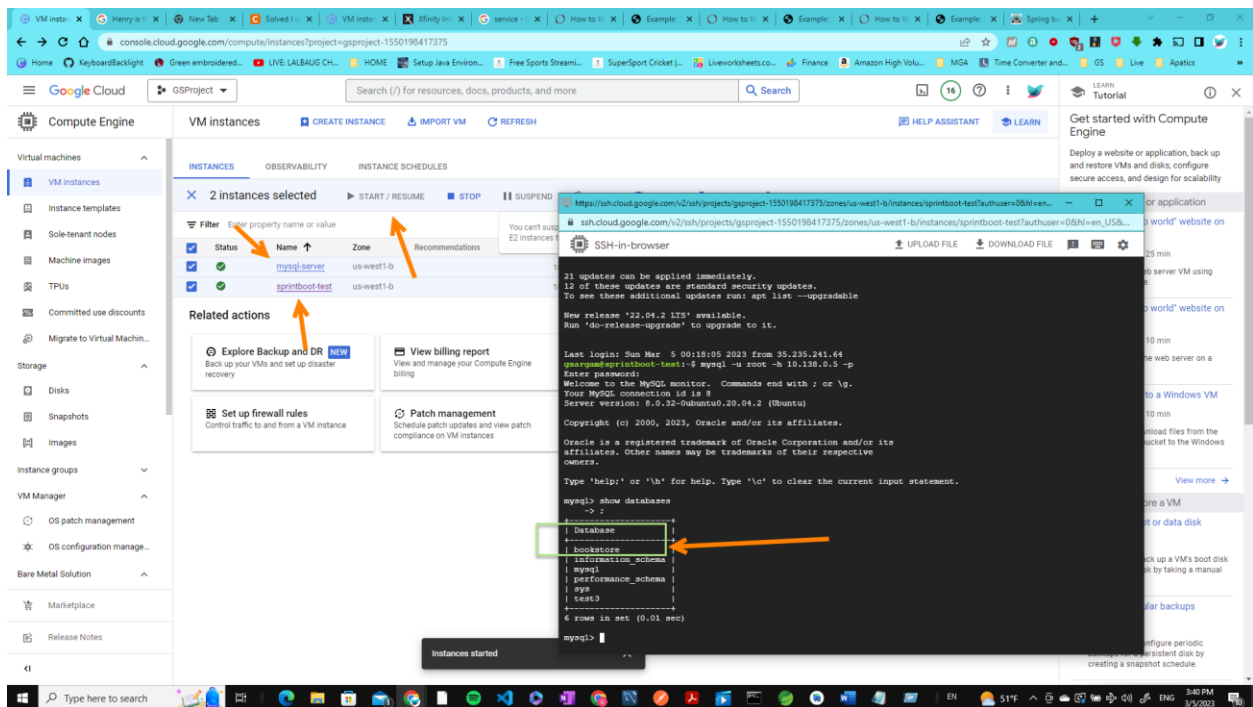
✓ Build Succeeded with **NO Errors**

```
Administrator: Command Prompt
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory C:\code\FinalProject\BookStoreAPIService\src\test\resources
[INFO]
[INFO] --- compiler:3.10.1:testCompile (default-testCompile) @ user-services ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\code\FinalProject\BookStoreAPIService\target\test-classes
[INFO]
[INFO] --- surefire:2.22.2:test (default-test) @ user-services ---
[INFO] Tests are skipped.
[INFO]
[INFO] --- jar:3.2.2:jar (default-jar) @ user-services ---
[INFO] Building jar: C:\code\FinalProject\BookStoreAPIService\target\Spring-Boot-Jpa-mysql.jar
[INFO]
[INFO] --- spring-boot:2.7.4:repackage (repackage) @ user-services ---
[INFO] Replacing main artifact with repackaged archive
[INFO]
[INFO] --- install:2.5.2:install (default-install) @ user-services ---
[INFO] Installing C:\code\FinalProject\BookStoreAPIService\target\Spring-Boot-Jpa-mysql.jar to C:\Users\gsarg.WISHHP\.m2\repository\edu\mga\restapi\user-services\0.0.1-SNAPSHOT\user-services-0.0.1-SNAPSHOT.jar
[INFO] Installing C:\code\FinalProject\BookStoreAPIService\pom.xml to C:\Users\gsarg.WISHHP\.m2\repository\edu\mga\restapi\user-services\0.0.1-SNAPSHOT\user-services-0.0.1-SNAPSHOT.pom
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 11.125 s
[INFO] Finished at: 2023-03-04T16:45:12-08:00
[INFO] -----
C:\code\FinalProject\BookStoreAPIService>
```

- ✓ Uploaded .jar file to the Google Storage to copy and run on VM



- ✓ Created database from API VM Instance by connecting mysql server on cloud before installing api



✓ Testing REST API using Postman

ITECFinalProject / GetBranch Copy


GET ⌵ http://34.145.1.1227:8080/api/branch/get

Params Authorization Headers (6) Body Pre-request Script Tests Settings

Query Params

KEY	VALUE
Key	Value

Body Cookies Headers (5) Test Results

Pretty Raw Preview Visualize JSON ⌵ 

```
11  {
12    "id": 10,
13    "name": "t",
14    "address": "tt",
15    "city": "tt",
16    "state": "tt22",
17    "zip": "22",
18    "phone": "22222222"
19  },
20  {
21    "id": 11,
22    "name": "t",
23    "address": "tt",
24    "city": "tt",
25    "state": "tt22",
26    "zip": "22",
27    "phone": "22222222"
28  },
29  {
30    "id": 12,
31    "name": "New Branch",
32    "address": "585 StageCoach Rd",
33    "city": "Dublin",
34    "state": "CA",
35    "zip": "94568",
36    "phone": "94567911"
37  }
38 }
```

rspace

New Import

GET PUT Ups GET GETB POST Crt GET Get POST Crt POST Crt GET Getb GET Getb POST Crt POST Crt POST Crt GET Getb GET GETB DEL Dele + No Environment

ITECFinalProject / GETBooks Copy

GET http://34.145.1227.8080/ap/book/get

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

KEY	VALUE	DESCRIPTION
Key	Value	Description

Body Cookies Headers (5) Test Results

Pretty Raw Preview Visualize JSON Bulk Edit

Status: 200 OK Time: 53 ms Size: 1.07 KB Save Response

```
31  {
32    "thumbnail1": "tux1",
33  },
34  {
35    "id": 6,
36    "author": "GS test",
37    "title": "title",
38    "description": "desc",
39    "thumbnail1": "url",
40    "price": 88.58
41  },
42  {
43    "id": 7,
44    "author": null,
45    "title": null,
46    "description": null,
47    "thumbnail1": null,
48    "price": null
49  },
50  {
51    "id": 8,
52    "author": null,
53    "title": null,
54    "description": null,
55    "thumbnail1": null,
56    "price": null
57  },
58  {
59    "id": 9,
60    "author": null,
61    "title": null,
62    "description": null,
63    "thumbnail1": null
64  },
65  }
```

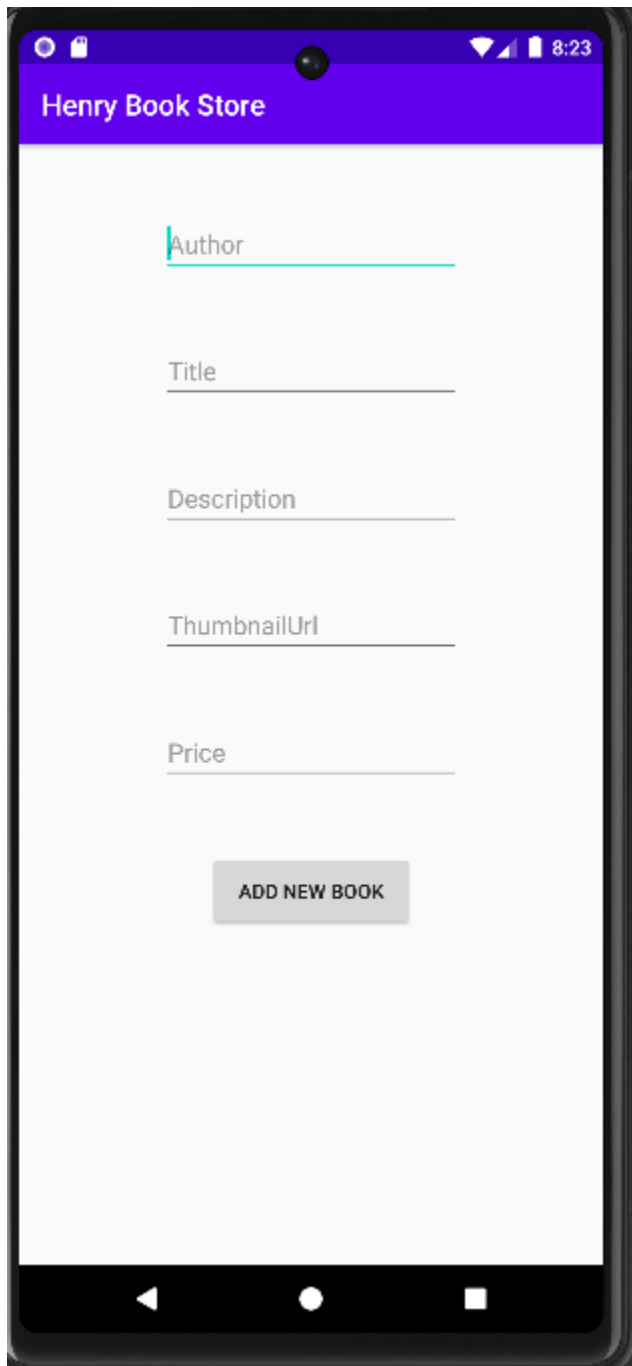
Created Copy of local requests to point to Google Cloud VM : Tested Successfully

Page | 7

- ✓ Connected Android app code to Google Instance REST API (Successfully tested)



✓ Add Book Screen



Henry Book Store

Author

Title

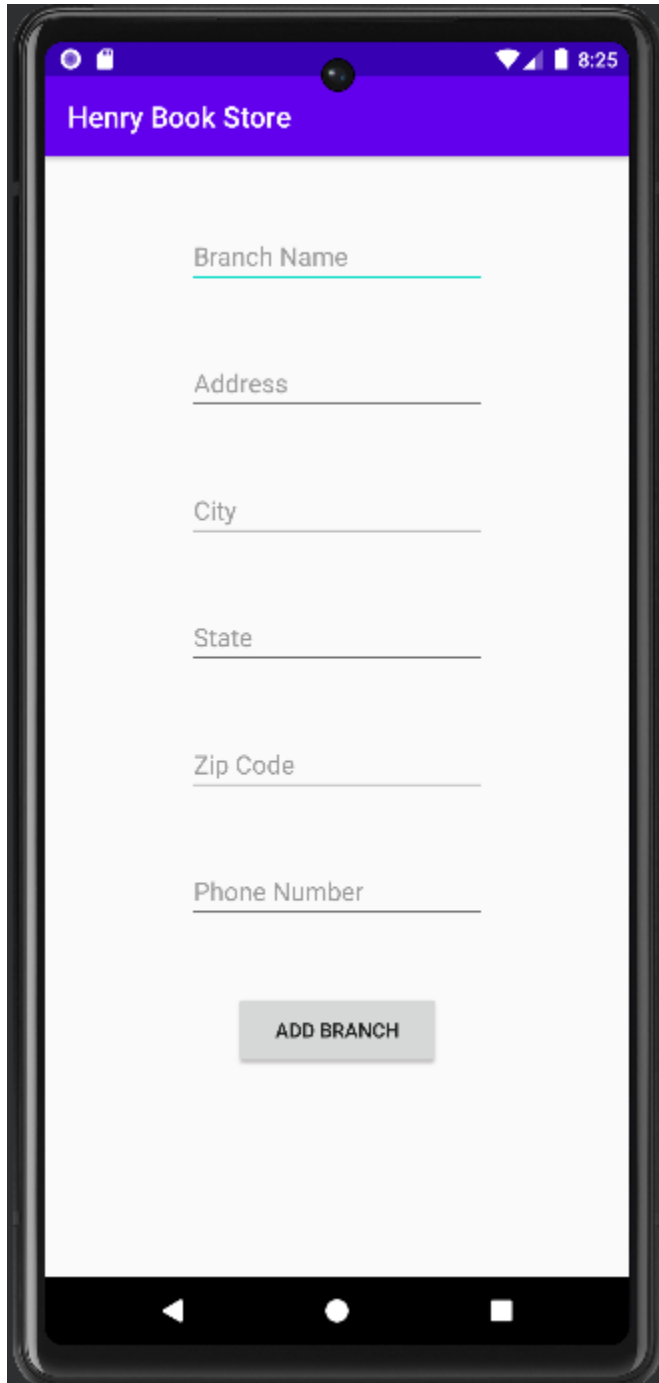
Description

ThumbnailUrl

Price

ADD NEW BOOK

- ✓ Add Branch Screen



Henry Book Store

Branch Name

Address

City

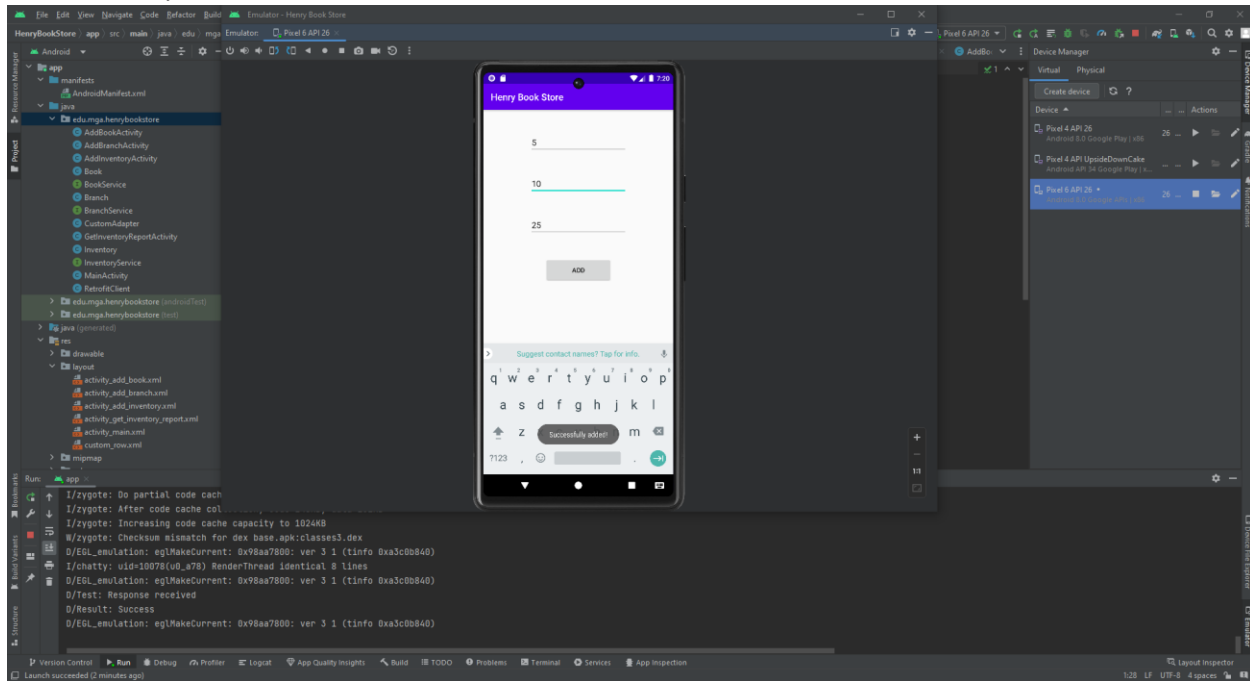
State

Zip Code

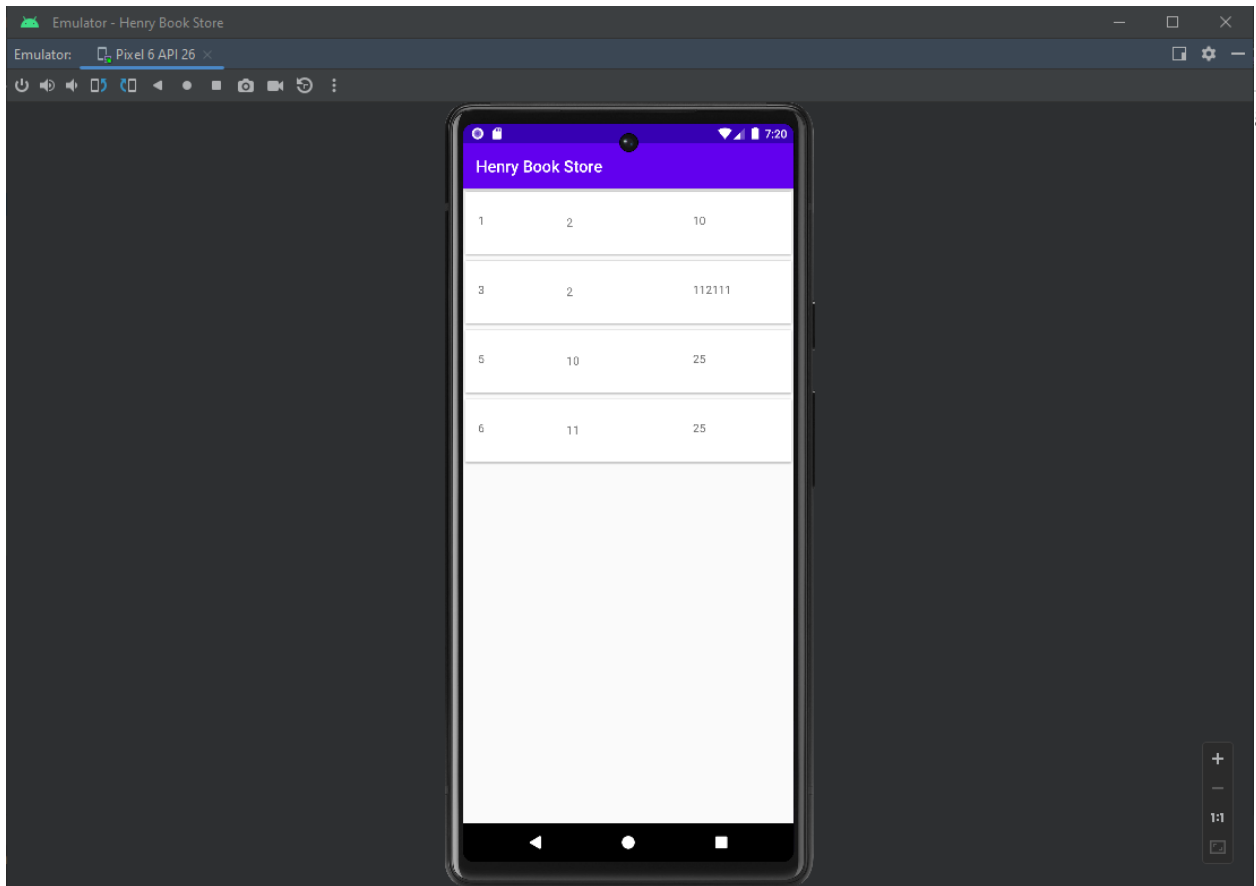
Phone Number

ADD BRANCH

Add Inventory Screen



✓ View Inventory Report



ITEC 6420 DISTRIBUTED ENTERPRISE SOFTWARE DESIGN AND DEVELOPMENT – ONLINE

FINAL PROJECT DEVELOPED BY

SARGAM, GANESH S.

March 05th 2023