

SPE MAJOR PROJECT

YOVO-AGEVERIFY

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Github Repo:-

<https://github.com/rakshit-g/SPE-YOVO>

DockerHub Profile:

<https://hub.docker.com/r/abhijainnn/yovo-backend-image>

<https://hub.docker.com/r/abhijainnn/yovo-frontend-image>

Abstract

The YOVO approach limits access to age-restricted products and contents. We are using several techniques together which leaves negligible chances of false identification.

The various features of the project are:

The first one is ID card verification - This feature requires the user to upload a photo of his identification card (Aadhar card). The card details are extracted and it uses the Aadhar Api/Verhoeff algo to verify whether the user is above 18 or not.

The second one is Automated facial age estimation - Using this feature, users can verify themselves by capturing a real-time selfie. The selfie is then sent to an ML model which predicts if the user is above 18 or not. The model implemented is quick and accurate.

The final feature is the age token - This feature is a “verify once use anywhere” feature in which on successful verification a user's details are stored that can be used directly on other applications without the hassle of going through the verification process again. Once verified, we will provide a token that will be linked to the user's phone number. The user can verify their age using this token and an OTP which will be sent to his phone number.

In the backend, we have a machine learning model for predicting the user's age in real-time. There is also a model to extract the information from the aadhar card of the user. This model uses OCR (Optical Character Recognition) technique for extracting the data. There is also a call to Aadhar Api/Verhoeff algo which is used for verifying the aadhar details of the user. We also maintain a database that keeps track of the age tokens provided to the users.

The front-end workflow is as follows. The applications which require age verification, redirect their users to our webpage where users are provided with three choices for verifying their age, namely - ID verification, and real-time age detection. Upon verification, users get an age token which can be used in other applications

Stacks Used

Frontend- React

Backend- Python

Database- Mongo DB

Containerization- Docker

VCS- Git

Login Page

Welcome to YOVO

New User




Email

Password

Login


When the user clicks on new user, Ageveriification page appears

Age-Verification

		
ID Verification Scan your ID document to verify your age.	Age Estimation Scan your face to get your age estimated.	Credit Card Verification Upload details of your credit card to verify your age.
Age verification using your ID document 1	No images are stored or shared 1	Age verification using credit card 1
Get verified in an instant 2	No ID document required 2	Get verified in an instant 2
Only show that you're over 18 3	Verify once and re-use 3	Only show that you're over 18 3
SELECT How it works?	SELECT How it works?	SELECT How it works?

The user has three steps to verify his/her age. For verification once, the user can choose any of the three methods. For saving his age token for future verification, the user can verify their age only by ID verification and once verified, the user can opt the option to save his/her details so that the user can verify their age in the future directly by logging in with email and password.

Click or Drop here



Valid Aadhar Number , age:22

If you want to save your age token to ease the process next time, click on the Age token:

Age token

You have verified your age this one time, if you donot want age token, redirect to store cart

DEVOPS

Git

The series of commands are executed to push the local code to the remote repository of GitHub.

```
git init
```

```
git add.
```

```
git commit -m "Commit Message"
```

```
git remote add origin
```

```
https://github.com/rakshit-g/SPE-YOVO.git
```

```
git push -u origin main
```

For Contributors

```
git clone https://github.com/rakshit-g/SPE-YOVO
```

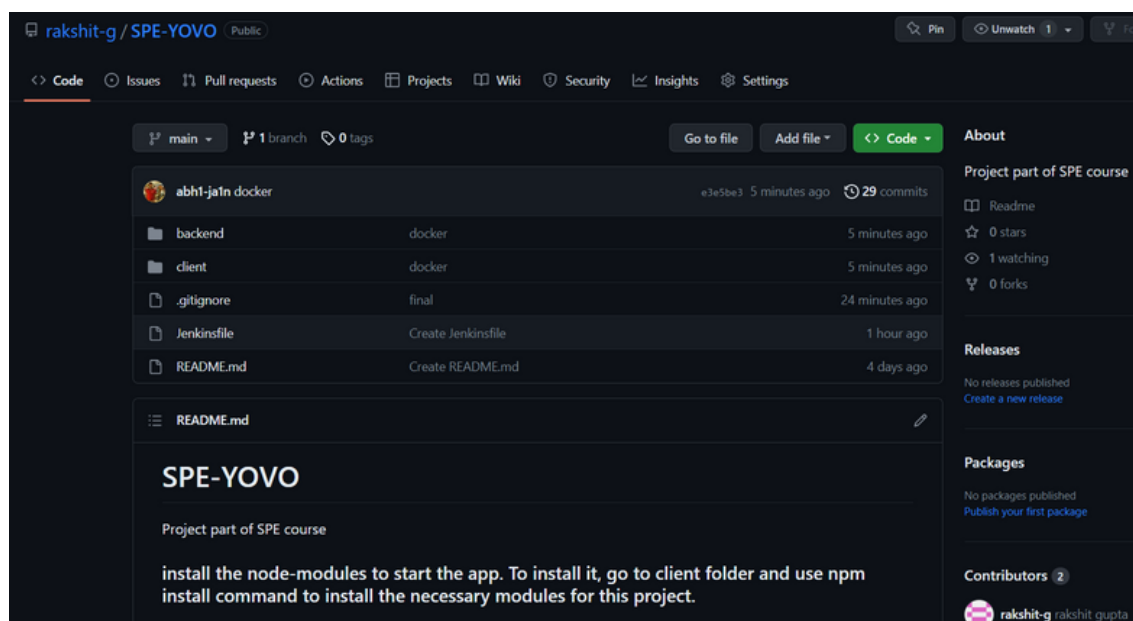
```
git add
```

```
git commit -m "Commit Message"
```

```
git remote add origin
```

```
https://github.com/rakshit-g/SPE-YOVO
```

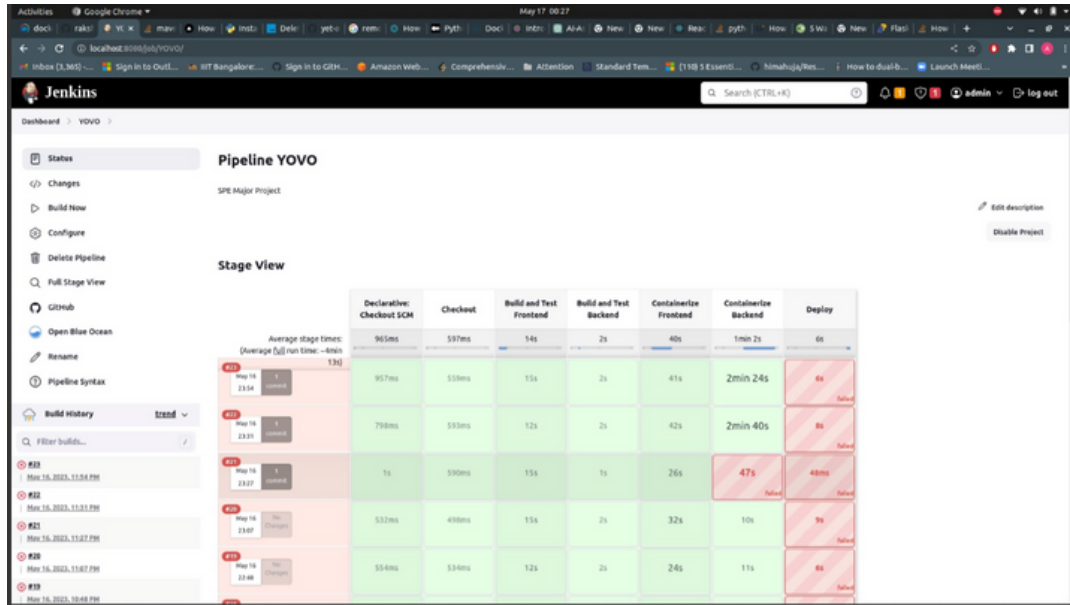
```
git push -u origin main
```



main -		
Commits on May 16, 2023		
docker-compose	abhi-jain committed 1 minute ago	28a114f
docker	abhi-jain committed 6 minutes ago	a4a1b4d
Update requirements.txt	abhi-jain committed 17 minutes ago	Verified 42b72ae
Update requirements.txt	abhi-jain committed 18 minutes ago	Verified 5289628
Update requirements.txt	abhi-jain committed 20 minutes ago	Verified 6d798d71
Update requirements.txt	abhi-jain committed 22 minutes ago	Verified a75ac2f
final	nishit-g committed 26 minutes ago	38a233a
final	nishit-g committed 28 minutes ago	4f284da
requirements.txt	abhi-jain committed 45 minutes ago	281f4d1
requirements.txt	abhi-jain committed 47 minutes ago	5d2282a
and	nishit-g committed 1 hour ago	463d3d8
final	nishit-g committed 1 hour ago	ac38fca
Merge branch 'main' of https://github.com/nishit-g/SPE-YONO	nishit-g committed 1 hour ago	b6a27a5
Create Jenkinsfile	abhi-jain committed 1 hour ago	Verified 0f79c8
Merge branch 'main' of https://github.com/nishit-g/SPE-YONO	nishit-g committed 1 hour ago	288a78a
Delete Jenkinsfile	abhi-jain committed 1 hour ago	Verified a47764a
Consumer	nishit-g committed 1 hour ago	457d3a7
Update Jenkinsfile	abhi-jain committed 2 hours ago	Verified 8a258db
Update Jenkinsfile	abhi-jain committed 2 hours ago	Verified a718b39
Create Jenkinsfile	abhi-jain committed 2 hours ago	Verified 288f0ca
database created	nishit-g committed 2 hours ago	c8f0890
Commits on May 14, 2023		
updated	nishit-g committed 2 days ago	9c3a186
Commits on May 13, 2023		
removing config	nishit-g committed 3 days ago	82baf44
removed config	nishit-g committed 3 days ago	0a6ae0d
Merge branch 'main' of https://github.com/nishit-g/SPE-YONO	nishit-g committed 3 days ago	8761649
added login page	nishit-g committed 3 days ago	5128008
Commits on May 12, 2023		
Create README.md		086727b

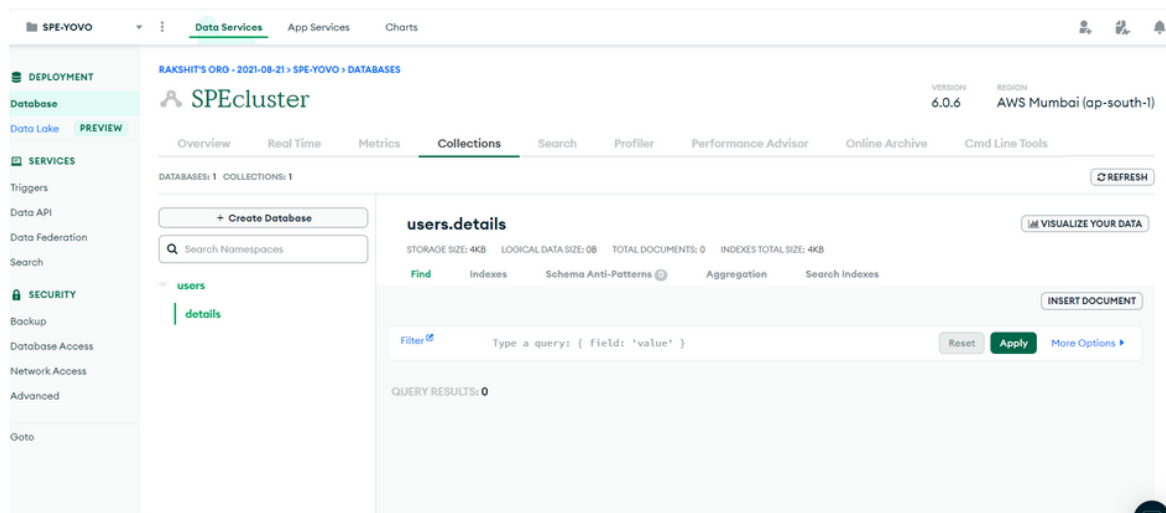
Commit history

Jenkins

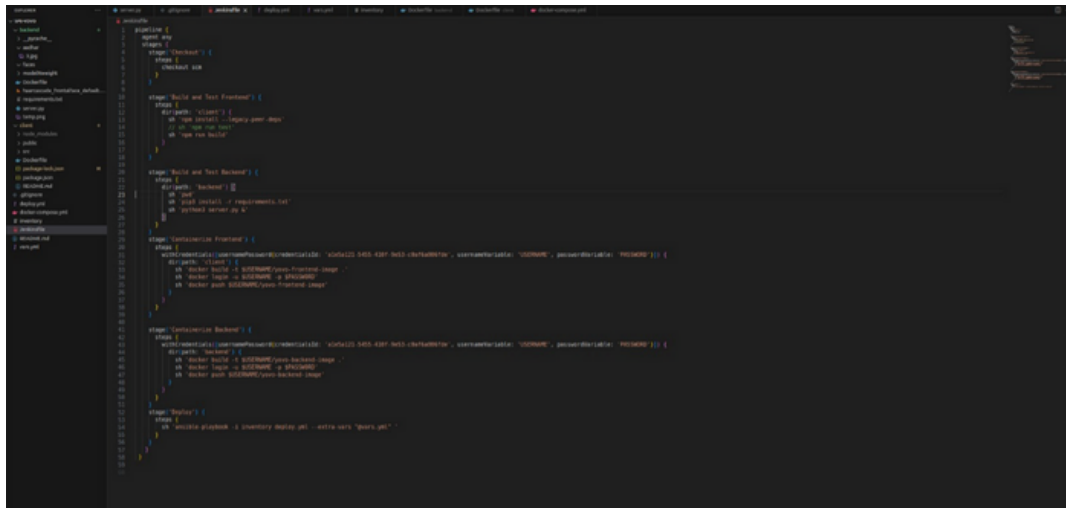


Jenkins Pipeline

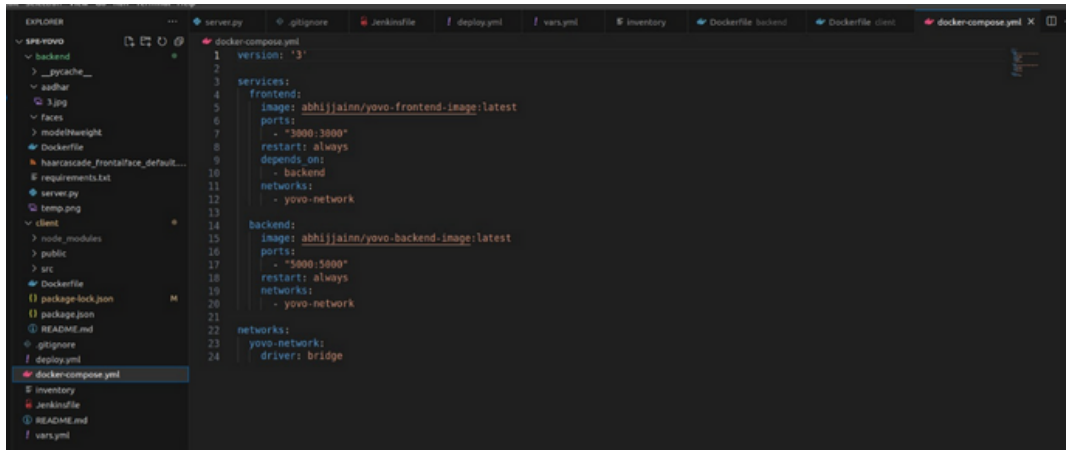
MongoDB



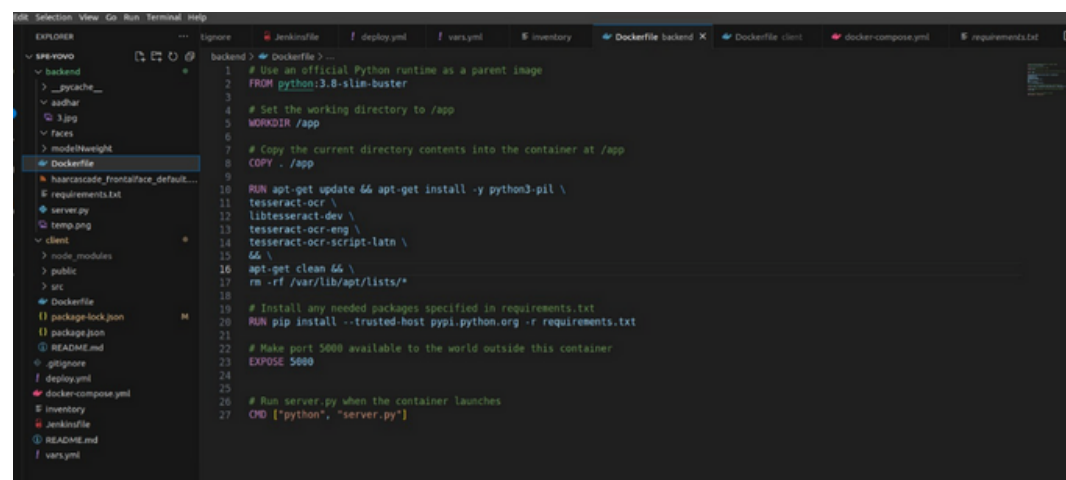
MongoDb database



Jenkins Pipeline



Docker compose file



Docker backend file

API table

No	Usecase	Api	Request Method
1	Login Page	<u>/login</u>	POST, GET
2	Aadhar Card verification	/aadhar	POST, GET
3	Sign up <u>page</u> using <u>otp</u>	/otp	POST, <u>GET</u>
4	Automated Age estimation using <u>real time</u> face	/age	POST, <u>GET</u>
5	Credit card verification page	<u>/credit</u>	POST, GET

YOVO-ageverify SNAPSHOTS

Welcome to YOVO


New User

Email

Password

Login

Login page



ID Verification

Scan your ID document to verify your age.


Age verification using your ID document1

Get verified in an instant2

Only show that you're over 183

SELECT

How it works?



Age Estimation

Scan your face to get your age estimated.


No images are stored or shared1

No ID document required2

Verify once and re-use3

SELECT

How it works?



Credit Card Verification

Upload details of your credit card to verify your age.

Age verification using credit card1

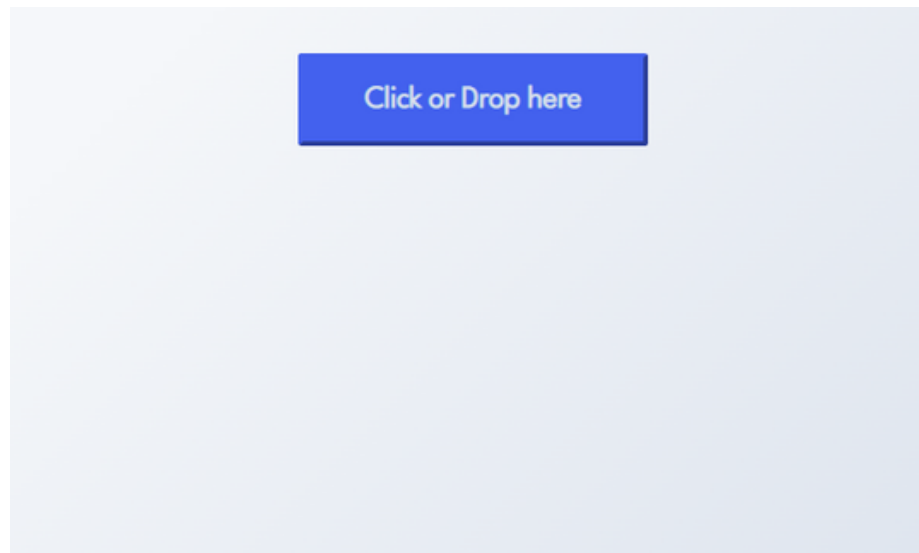
Get verified in an instant2

Only show that you're over 183

SELECT


How it works?

Verification methods



Aadhar upload page

Click or Drop here



Valid Aadhar Number , age:22

If you want to save your age token to ease the process next time, click on the Age token:

Age token

You have verified your age this one time, if you donot want age token, redirect to store cart

after verification of adhar

OTP Verification

rakshitgupta602@gmail.com

.....|

Send OTP

sign up using otp verification

OTP Verification

rakshitgupta602@gmail.com

.....

Send OTP

OTP Sent

Enter the OTP received in your email:

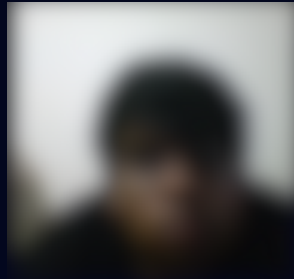
399167

Verify OTP

OTP verification successful.

[You have successfully verified your age and your details are saved. Click on this to redirect to cart.](#)

Otp verified



Capture

,Above 18

[If you want to further register your age token to ease the process next time, click on this to go verify your aadhar OR](#)
[You have verified your age this one time, go to store cart](#)

real-time age verification using face

4400060118505801

Submit

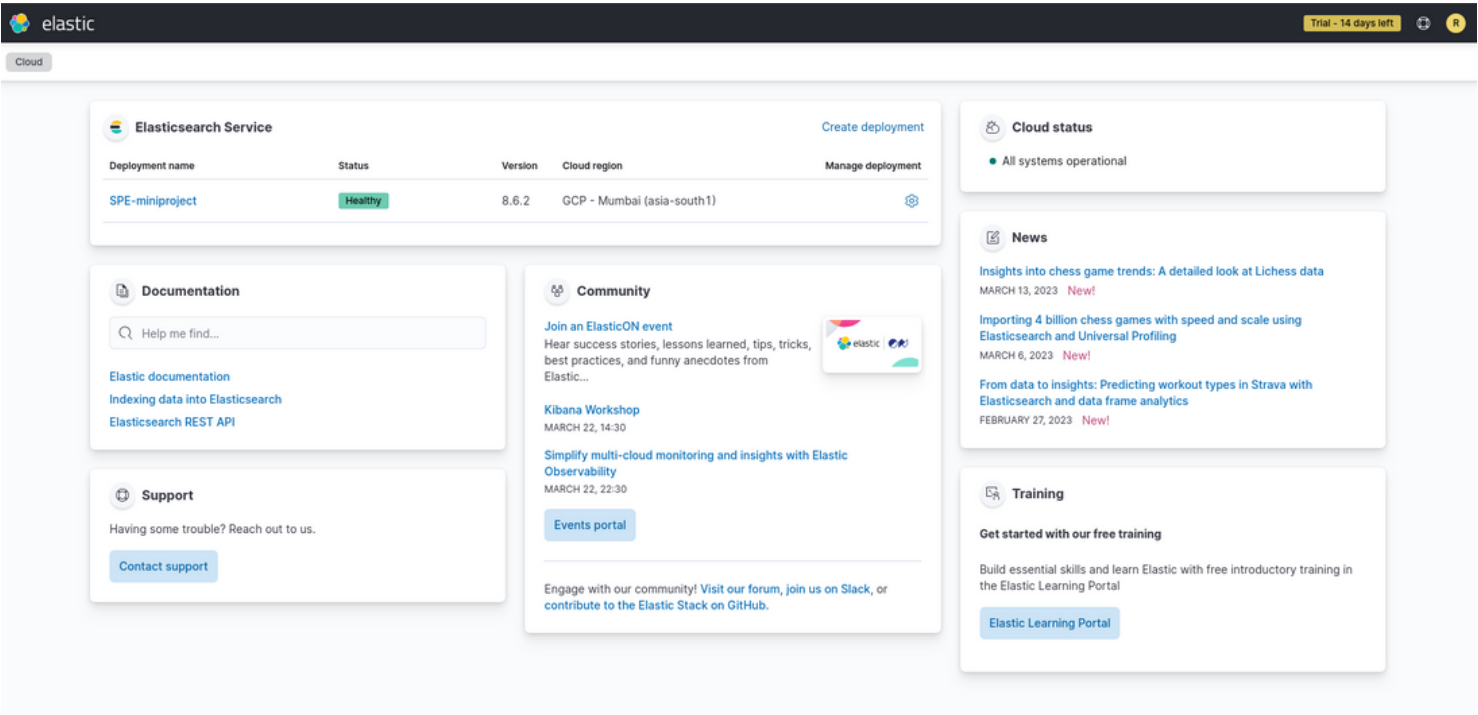
Valid Credit Card

credit card verification page

7. Monitoring:

Monitoring ELK stack is a collection of three open-source products – Elasticsearch, Logstash, and Kibana. ELK stack provides centralized logging in order to identify problems with servers or applications.

E stands for ElasticSearch: used for storing logs L stands for LogStash : used for both shipping as well as processing and storing logs K stands for Kibana: is a visualization tool (a web interface) which is hosted through Nginx or Apache.



Plugins supporting *.log files found.				
1	2023-03-21 22:32:51.317	[main]	INFO	org.example.Main - factorial of 5.0 is: 120.0
2	2023-03-21 22:32:51.320	[main]	INFO	org.example.Main - factorial of 4.0 is: 24.0
3	2023-03-21 22:32:51.340	[main]	INFO	org.example.Main - Output of 5.0 to the power of 1.0 is: 5.0
4	2023-03-21 22:32:51.341	[main]	INFO	org.example.Main - Output of 4.0 to the power of 2.0 is: 16.0
5	2023-03-21 22:32:51.341	[main]	INFO	org.example.Main - natural logarithm of 5.0 is: 1.6094379124341003
6	2023-03-21 22:32:51.341	[main]	INFO	org.example.Main - natural logarithm of 4.0 is: 1.3862943611198906
7	2023-03-21 22:32:51.342	[main]	INFO	org.example.Main - square root of 25.0 is: 5.0
8	2023-03-21 22:32:51.342	[main]	INFO	org.example.Main - square root of 16.0 is: 4.0
9	2023-03-21 22:57:46.689	[main]	INFO	org.example.Main - factorial of 5.0 is: 120.0
10	2023-03-21 22:57:46.692	[main]	INFO	org.example.Main - factorial of 4.0 is: 24.0
11	2023-03-21 22:57:46.715	[main]	INFO	org.example.Main - Output of 5.0 to the power of 1.0 is: 5.0
12	2023-03-21 22:57:46.716	[main]	INFO	org.example.Main - Output of 4.0 to the power of 2.0 is: 16.0
13	2023-03-21 22:57:46.717	[main]	INFO	org.example.Main - natural logarithm of 5.0 is: 1.6094379124341003
14	2023-03-21 22:57:46.717	[main]	INFO	org.example.Main - natural logarithm of 4.0 is: 1.3862943611198906
15	2023-03-21 22:57:46.718	[main]	INFO	org.example.Main - square root of 25.0 is: 5.0
16	2023-03-21 22:57:46.718	[main]	INFO	org.example.Main - square root of 16.0 is: 4.0
17	2023-03-21 22:57:46.719	[main]	INFO	org.example.Main - square root of 4.0 is: 2.0
18	2023-03-21 22:57:46.720	[main]	INFO	org.example.Main - factorial of 0.0 is: 1.0
19	2023-03-21 22:57:46.721	[main]	INFO	org.example.Main - natural logarithm of 10.0 is: 2.302585092994046
20				