NAME : NAGAVENI L G

SRN : PES2UG21CS315

SEC :6F

TASK1

1a

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG> docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/

PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG> |
```

TASK2

2a

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task2> docker-compose up
[+] Running 10/10
 ✔ mongodb 9 layers [██████████]      0B/0B      Pulled                                                                    585.4s
   ✔ 57c139bbda7e Pull complete                                                                                            170.2s
   ✔ 5ded68502327 Pull complete                                                                                              2.6s
   ✔ 25b2700cb3f2 Pull complete                                                                                             44.5s
   ✔ 40c78628995a Pull complete                                                                                             28.4s
   ✔ 81f3a3fe93a2 Pull complete                                                                                             31.6s
   ✔ 4fbdadf2860f Pull complete                                                                                             36.3s
   ✔ 8050fbbed2fd Pull complete                                                                                             38.8s
   ✔ 6d012f43eccc Pull complete                                                                                            561.8s
   ✔ 80634cd52614 Pull complete                                                                                             53.1s
[+] Building 639.4s (11/11) FINISHED                                                                              docker:default
 => [pycode internal] load build definition from Dockerfile                                                                 0.2s
 => => transferring dockerfile: 150B                                                                                        0.0s
 => [pycode internal] load metadata for docker.io/library/python:latest                                                     6.7s
 => [pycode auth] library/python:pull token for registry-1.docker.io                                                        0.0s
 => [pycode internal] load .dockerignore                                                                                    0.1s
 => => transferring context: 2B                                                                                             0.0s
 => [pycode internal] load build context                                                                                    0.0s
 => => transferring context: 441B                                                                                           0.0s
 => [pycode 1/4] FROM docker.io/library/python:latest@sha256:a3d69b8412f7068fd060ccc7e175825713d5a767e1e14753e75bce6f746c8a7e 615.1s
 => => resolve docker.io/library/python:latest@sha256:a3d69b8412f7068fd060ccc7e175825713d5a767e1e14753e75bce6f746c8a7e       0.0s
 => => sha256:97a22f3bb3ab8d549ff1355d80d0c2b016f8c0e1dd1adf4d90bc8142038cf4ac 2.01kB / 2.01kB                              0.0s
 => => sha256:6a299ae9cfd996c1149a699d36cdaa76fa332c8e9d66d6678fa9a231d9ead04c 49.58MB / 49.58MB                          309.0s
 => => sha256:68e92d11b04ec0fe48e60d59964704aca234084f87af5d1a068c49456b37fe3d 64.14MB / 64.14MB                          324.2s
 => => sha256:a3d69b8412f7068fd060ccc7e175825713d5a767e1e14753e75bce6f746c8a7e 2.14kB / 2.14kB                              0.0s
 => => sha256:86ac1e3337a9f9f5f6cac27a9482181bf1fa5c66982830439a6cf52a9b214df0 7.12kB / 7.12kB                              0.0s
 => => sha256:e08e8703b2fb5e50153f792f3192087d26970d262806b397049d61b9a14b3af5 24.05MB / 24.05MB                           77.5s
 => => sha256:5b9fe7fef9befda786bc8e1dd1ae42ffd8b9c37a4cce3c433e65ebb890cb1672 211.11MB / 211.11MB                        600.1s
 => => sha256:8986Ua904dd0b3b594959a6dfd2aff6d693ecce79a3c37484bb2e0a95fbf51a7 6.39MB / 6.39MB                            338.8s
```
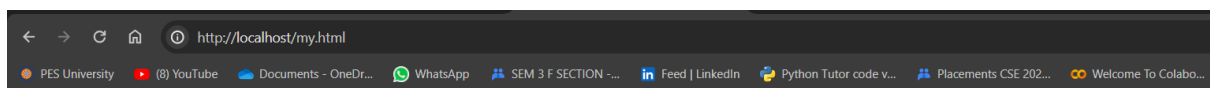
2b

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task2> docker-compose up --scale pycode=3
[+] Running 4/4
 ✓ Container task2-mongodb-1   Created
 ✓ Container task2-pycode-1    Created
 ✓ Container task2-pycode-3    Created
 ✓ Container task2-pycode-2    Created
Attaching to mongodb-1, pycode-1, pycode-2, pycode-3
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.407+00:00"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"main","msg":"Automatically disabling TLS
force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.415+00:00"},"s":"I",  "c":"NETWORK",  "id":4915701,"ctx":"main","msg":"Initialized wire specificat:
r":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":21},"ou
"minWireVersion":6,"maxWireVersion":21},"isInternalClient":true}}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.418+00:00"},"s":"I",  "c":"NETWORK",  "id":4648601, "ctx":"main","msg":"Implicit TCP FastOpen unava:
f TCP FastOpen is required, set tcpFastOpenServer, tcpFastOpenClient, and tcpFastOpenQueueSize."}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.427+00:00"},"s":"I",  "c":"REPL",     "id":5123008, "ctx":"main","msg":"Successfully registered Pri
ervice","attr":{"service":"TenantMigrationDonorService","namespace":"config.tenantMigrationDonors"}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.428+00:00"},"s":"I",  "c":"REPL",     "id":5123008, "ctx":"main","msg":"Successfully registered Pri
ervice","attr":{"service":"TenantMigrationRecipientService","namespace":"config.tenantMigrationRecipients"}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.428+00:00"},"s":"I",  "c":"CONTROL",  "id":5945603, "ctx":"main","msg":"Multi threading initialized
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.428+00:00"},"s":"I",  "c":"TENANT_M", "id":7091600, "ctx":"main","msg":"Starting TenantMigrationAcc
rRegistry"}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.429+00:00"},"s":"I",  "c":"CONTROL",  "id":4615611, "ctx":"initandlisten","msg":"MongoDB starting",
pid:1,"port":27017,"dbPath":"/data/db","architecture":"64-bit","host":"6f93c4977368"}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.430+00:00"},"s":"I",  "c":"CONTROL",  "id":23403,   "ctx":"initandlisten","msg":"Build Info","attr"
nfo":{"version":"7.0.5","gitVersion":"7809d71e84e314b497f282ea8aa06d7ded3eb205","openSSLVersion":"OpenSSL 3.0.2 15 Mar 2022","modules":[],"allocato
loc","environment":{"distmod":"ubuntu2204","distarch":"x86_64","target_arch":"x86_64"}}}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.430+00:00"},"s":"I",  "c":"CONTROL",  "id":51765,   "ctx":"initandlisten","msg":"Operating System",
os":{"name":"Ubuntu","version":"22.04"}}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.430+00:00"},"s":"I",  "c":"CONTROL",  "id":21951,   "ctx":"initandlisten","msg":"Options set by com
","attr":{"options":{"net":{"bindIp":"*"}}}}
mongodb-1  | {"t":{"$date":"2024-02-06T10:11:35.435+00:00"},"s":"I",  "c":"STORAGE",  "id":22270,   "ctx":"initandlisten","msg":"Storage engine to
ted by data files","attr":{"dbpath":"/data/db","storageEngine":"wiredTiger"}}
```

TASK3

3a


```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-nginx>  docker run -p 80:80 task3
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2024/02/06 13:06:18 [notice] 1#1: using the "epoll" event method
2024/02/06 13:06:18 [notice] 1#1: nginx/1.25.3
2024/02/06 13:06:18 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2024/02/06 13:06:18 [notice] 1#1: OS: Linux 5.10.102.1-microsoft-standard-WSL2
2024/02/06 13:06:18 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2024/02/06 13:06:18 [notice] 1#1: start worker processes
2024/02/06 13:06:18 [notice] 1#1: start worker process 29
2024/02/06 13:06:18 [notice] 1#1: start worker process 30
2024/02/06 13:06:18 [notice] 1#1: start worker process 31
2024/02/06 13:06:18 [notice] 1#1: start worker process 32
2024/02/06 13:06:18 [notice] 1#1: start worker process 33
2024/02/06 13:06:18 [notice] 1#1: start worker process 34
2024/02/06 13:06:18 [notice] 1#1: start worker process 35
2024/02/06 13:06:18 [notice] 1#1: start worker process 36
```

3b

← → C ⌂ ⓘ http://localhost/my.html

🔴 PES University   ▶️ (8) YouTube   ☁️ Documents - OneDr...   🟢 WhatsApp   👥 SEM 3 F SECTION -...   in Feed | LinkedIn   🐍 Python Tutor code v...   👥 Placements CSE 202...   ∞ Welcome To Colabo...

My SRN is PES2UG21CS315

I am running a nginx container!


```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo> docker run -dp 27017:27017 mongo
6738f172cfd34822a5f16d3f910ed19e1f571a9c30ecd54bcce1a159e4797e61
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo> |
```

3c

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo>  docker run task3
Inserted into the MongoDB database!
Fecthed from MongoDB:  {'_id': ObjectId('65c23241b90784fdbe8f79b7'), 'Name:': 'Nagaveni L G', 'SRN': 'PES2UG21CS315'}
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo>
```

3d

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED         STATUS                     PORTS                      NAMES
02e5e3935d30   mongo:latest   "docker-entrypoint.s…"   33 seconds ago  Up 30 seconds              0.0.0.0:27017->27017/tcp   mongodb
644e9f089412   task3          "python sample.py"       5 minutes ago   Exited (0) 5 minutes ago                              vigorous_sanderson
bb9c73213e79   mongo          "docker-entrypoint.s…"   10 minutes ago  Created                                               cool_heisenberg
6738f172cfd3   mongo          "docker-entrypoint.s…"   17 minutes ago  Exited (0) 4 minutes ago                              condescending_saha
6483a8118d08   7d6b032c0bcb   "/docker-entrypoint.…"   20 minutes ago  Exited (0) 18 minutes ago                             boring_cohen
9c1407acfa7b   task2-pycode   "python sample.py"       3 hours ago     Exited (0) 3 hours ago                                task2-pycode-3
ddd5a29175f6   task2-pycode   "python sample.py"       3 hours ago     Exited (0) 3 hours ago                                task2-pycode-2
ba5bb22ab543   task2-pycode   "python sample.py"       3 hours ago     Exited (0) 3 hours ago                                task2-pycode-1
6f93c4977368   mongo          "docker-entrypoint.s…"   3 hours ago     Exited (0) 3 hours ago                                task2-mongodb-1
f0bff74cf565   hello-world    "/hello"                 4 hours ago     Exited (0) 4 hours ago                                wizardly_cerf
331d17a333b4   hello-world    "/hello"                 4 hours ago     Exited (0) 4 hours ago                                elegant_archimedes
1f04eeeeb7ef   hello-world    "/hello"                 4 hours ago     Exited (0) 4 hours ago                                focused_perlman
4a199703e548   hello-world    "/hello"                 20 hours ago    Exited (0) 20 hours ago                               laughing_gauss
95005e417721   hello-world    "/hello"                 44 hours ago    Exited (0) 44 hours ago                               beautiful_pare
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo>
```

3e

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo> docker build -t task3 .
[+] Building 6.6s (10/10) FINISHED                                                                          docker:default
 => [internal] load build definition from Dockerfile                                                                  0.1s
 => => transferring dockerfile: 150B                                                                                  0.0s
 => [internal] load metadata for docker.io/library/python:latest                                                     5.9s
 => [auth] library/python:pull token for registry-1.docker.io                                                        0.0s
 => [internal] load .dockerignore                                                                                    0.0s
 => => transferring context: 2B                                                                                      0.0s
 => [1/4] FROM docker.io/library/python:latest@sha256:a3d69b8412f7068fd060ccc7e175825713d5a767e1e14753e75bce6f746c8a7e 0.0s
 => [internal] load build context                                                                                   0.0s
 => => transferring context: 448B                                                                                    0.0s
 => CACHED [2/4] RUN apt-get update                                                                                  0.0s
 => CACHED [3/4] RUN pip install pymongo                                                                             0.0s
 => [4/4] COPY sample.py sample.py                                                                                   0.2s
 => exporting to image                                                                                               0.2s
 => => exporting layers                                                                                              0.1s
 => => writing image sha256:dc9d079c05aeb1f6cb05ac4ece8c2f2382395b3078f3f2022b131a7268961c1c                         0.0s
 => => naming to docker.io/library/task3                                                                             0.1s

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo>  docker run --network=my-bridge-network task3
Inserted into the MongoDB database!
Fecthed from MongoDB:  {'_id': ObjectId('65c2346d4cbdd9ae2a1cd81d'), 'Name:': 'Nagaveni L G', 'SRN': 'PES2UG21CS315'}
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task3\task3-pymongo>
```

TASK4

4a

```
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task4> docker run task4
Running this inside a container !
My SRN is PES2UG21CS315
PS C:\Users\Praka\OneDrive\Documents\6thSEM\CC\PES2UG21CS315_NAGAVENI_LG\Assignment-2 Docker\task4>
```

4b

(i) Add a short description for this repository   Update
      The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.

🌐 pes2ug21cs315 / **task4**

Docker commands   Public View

To push a new tag to this repository:

Description

This repository does not have a description ✏️   `docker push pes2ug21cs315/task4:tagname`

🕐 Last pushed: 2 minutes ago

Tags   **Automated Builds**

This repository contains 1 tag(s).   Manually pushing images to Hub? Connect your account to GitHub or
                                                            Bitbucket to automatically build and tag new images whenever your
| Tag | OS | Type | Pulled | Pushed | code is updated, so you can focus your time on creating.
|-----|-----|------|--------|--------|
| ● 1.0 | 🐧 | Image | --- | 2 minutes ago | Available with Pro, Team and Business subscriptions. Read more about
                                                            automated builds ↗.
See all
                                                            Upgrade