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Graduate and Extended Studies

FA19: CMPE-297 Sec 01 - Special Topics

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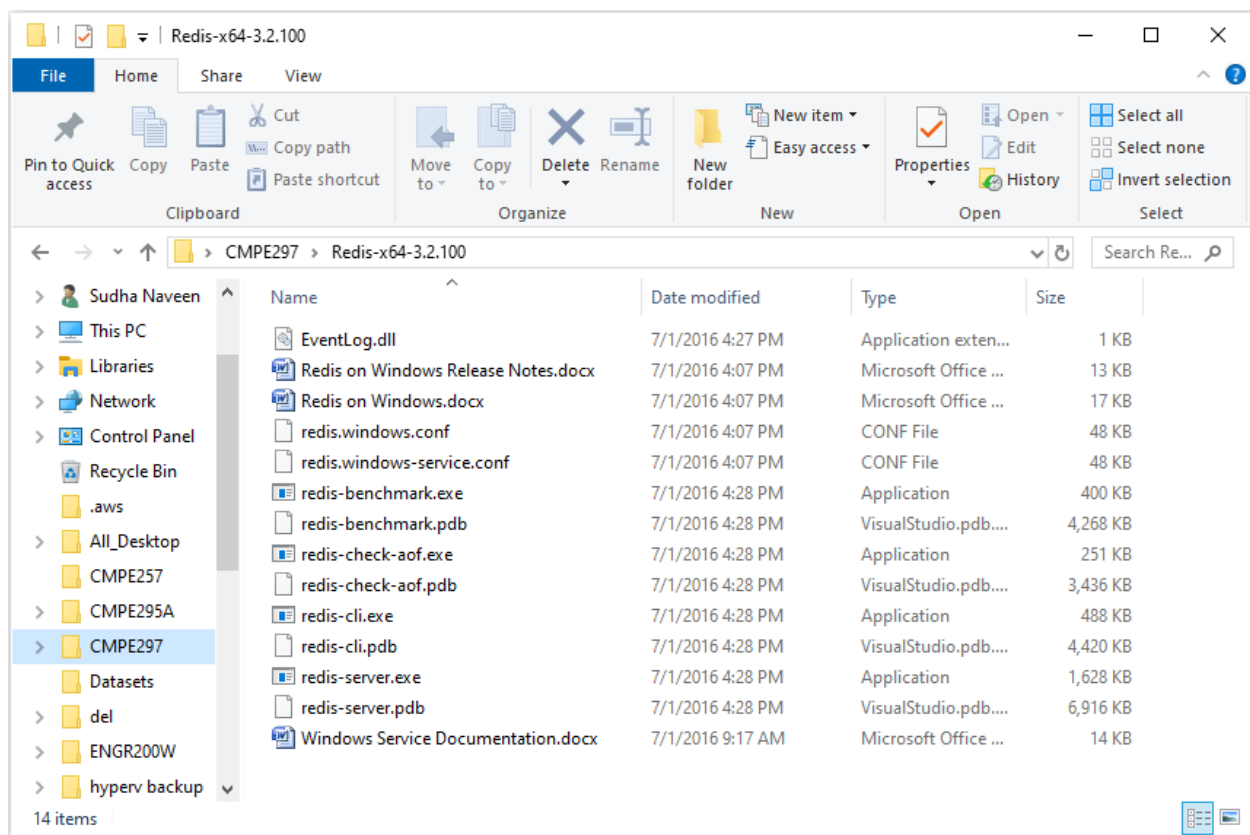
Learning Objective: create an in-memory redis cache database.

Please download Redis Cache and develop a simple interface on redis cache console CLI application to add following key value pairs:

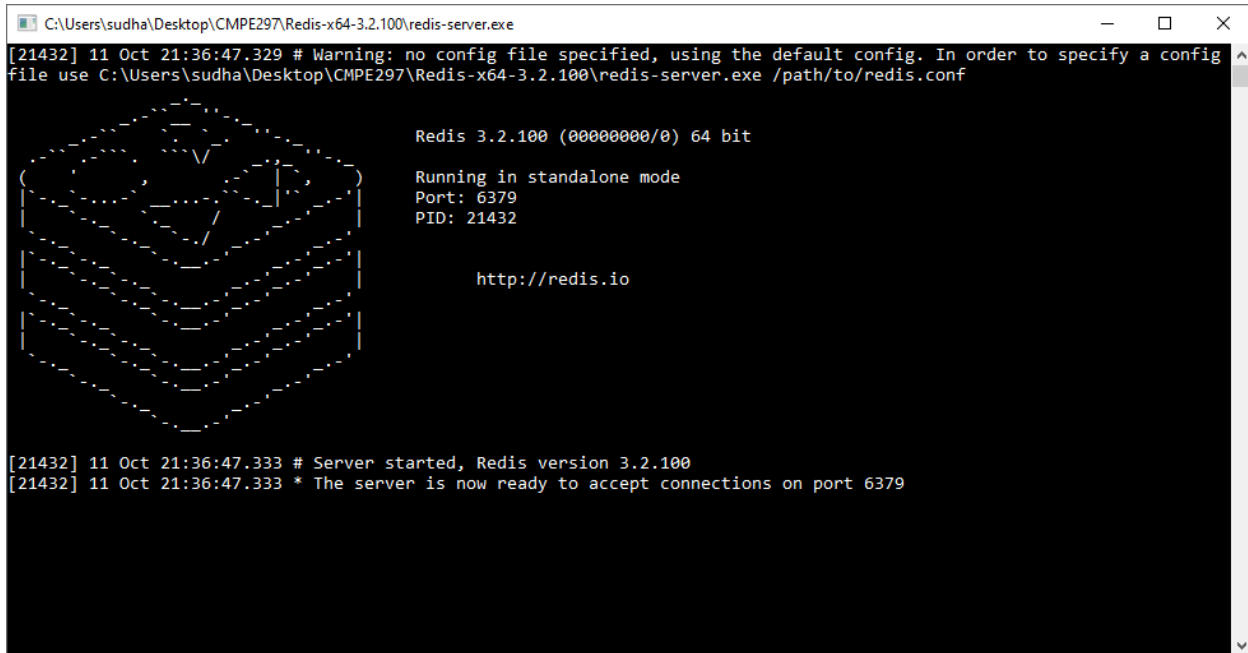
- Key: "Database"
- Value: "In-Memory"
- Key: "User"
- Value: "In-Memory User"
- Key: "Password"
- Value: "none"

Screenshots:

- **Download the latest version of Redis for Windows:**
<https://github.com/microsoftarchive/redis/releases>
- **Unzip the file by extracting it in a specified folder.**



- Run the redis-server.exe file to start Redis Server. The Redis Server starts on port 6379.

A screenshot of a Windows command prompt window titled "C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-server.exe". The window shows the Redis server startup process. It starts with a warning about no config file specified, followed by the Redis logo (a stylized cube with a 'V' inside). The text indicates it's Redis 3.2.100 (64 bit), running in standalone mode on port 6379 with PID 21432. It also shows the URL http://redis.io. At the bottom, it confirms the server started and is ready to accept connections on port 6379.

```
C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-server.exe
[21432] 11 Oct 21:36:47.329 # Warning: no config file specified, using the default config. In order to specify a config
file use C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-server.exe /path/to/redis.conf

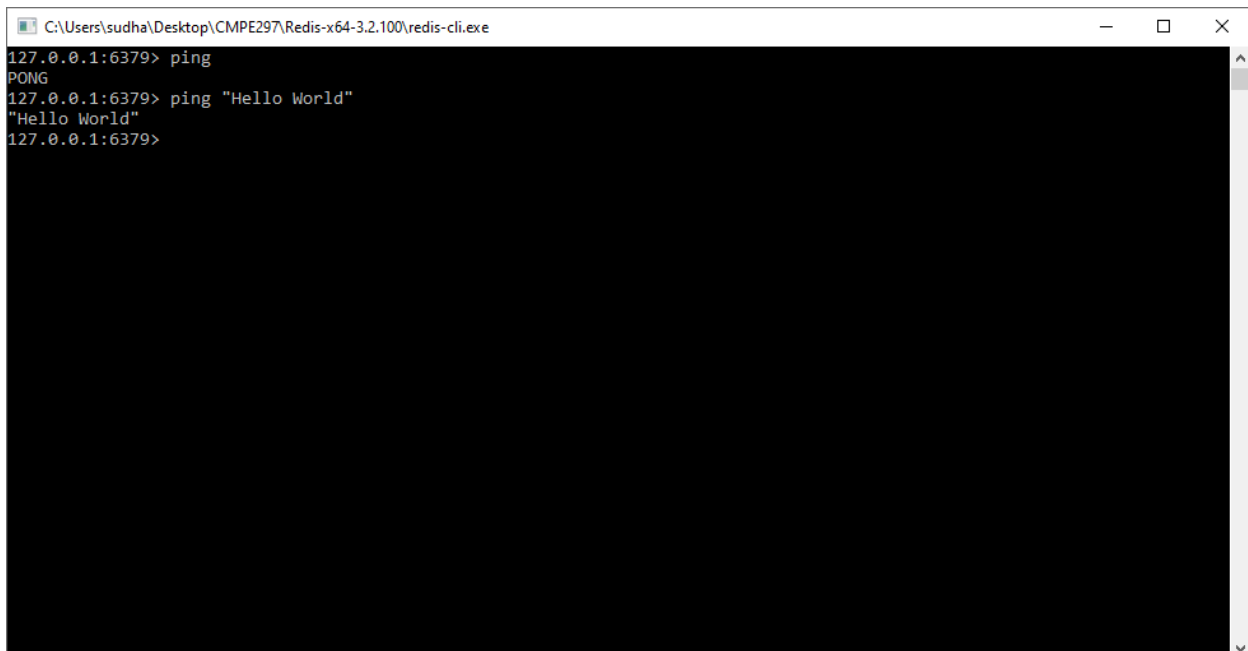
Redis 3.2.100 (00000000/0) 64 bit

Running in standalone mode
Port: 6379
PID: 21432

http://redis.io

[21432] 11 Oct 21:36:47.333 # Server started, Redis version 3.2.100
[21432] 11 Oct 21:36:47.333 * The server is now ready to accept connections on port 6379
```

- Check the connection by pinging the redis server. Server responds to the ping message.

A screenshot of a Windows command prompt window titled "C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-cli.exe". The window shows the Redis CLI interface. The user enters 'ping' and receives 'PONG'. Then, the user enters 'ping "Hello World"' and receives '"Hello World"'.

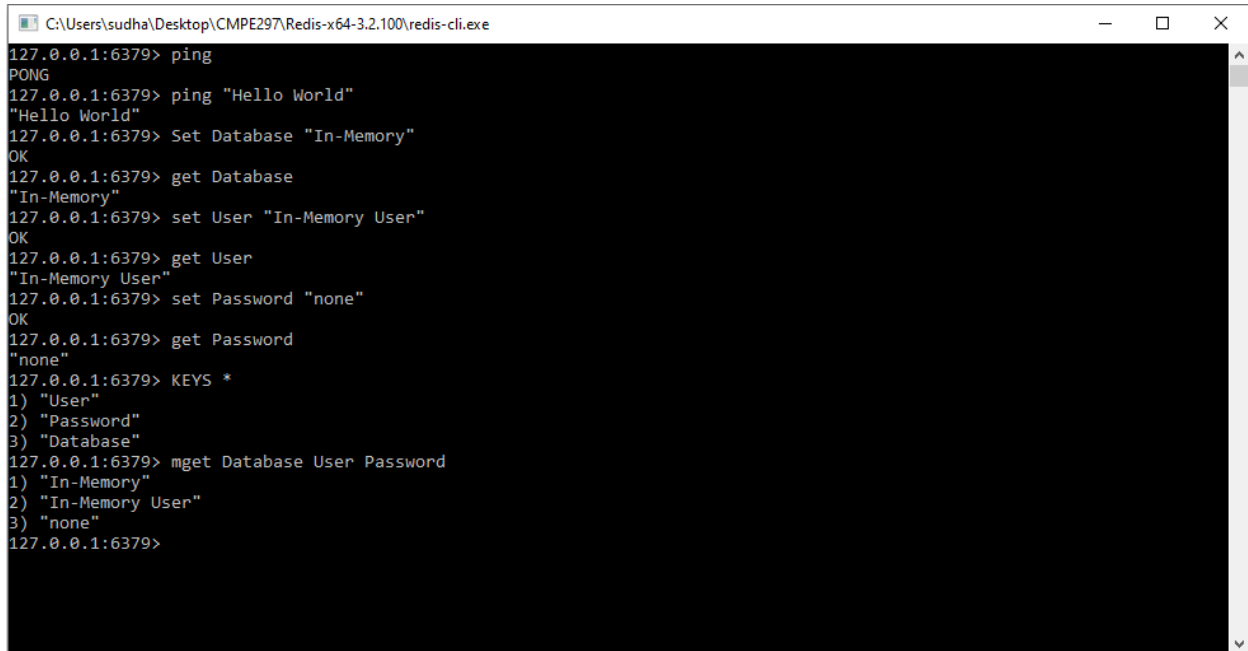
```
C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-cli.exe
127.0.0.1:6379> ping
PONG
127.0.0.1:6379> ping "Hello World"
"Hello World"
127.0.0.1:6379>
```

- **Store the key-value pairs by inputting 'set key value'. Retrieve the value for corresponding key by 'get key'. The key-value pairs given here are:**
 - Key: "Database"
 - Value: "In-Memory"
 - Key: "User"
 - Value: "In-Memory User"
 - Key: "Password"
 - Value: "none"



```
C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-cli.exe
127.0.0.1:6379> ping
PONG
127.0.0.1:6379> ping "Hello World"
"Hello World"
127.0.0.1:6379> Set Database "In-Memory"
OK
127.0.0.1:6379> get Database
"In-Memory"
127.0.0.1:6379> set User "In-Memory User"
OK
127.0.0.1:6379> get User
"In-Memory User"
127.0.0.1:6379> set Password "none"
OK
127.0.0.1:6379> get Password
"none"
127.0.0.1:6379>
```

- List all the stored keys by **KEYS ***. This command retrieves all the keys stored in redis cache. We can also retrieve their corresponding values by ‘**mget [key....]**’.



```
C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-cli.exe
127.0.0.1:6379> ping
PONG
127.0.0.1:6379> ping "Hello World"
"Hello World"
127.0.0.1:6379> Set Database "In-Memory"
OK
127.0.0.1:6379> get Database
"In-Memory"
127.0.0.1:6379> set User "In-Memory User"
OK
127.0.0.1:6379> get User
"In-Memory User"
127.0.0.1:6379> set Password "none"
OK
127.0.0.1:6379> get Password
"none"
127.0.0.1:6379> KEYS *
1) "User"
2) "Password"
3) "Database"
127.0.0.1:6379> mget Database User Password
1) "In-Memory"
2) "In-Memory User"
3) "none"
127.0.0.1:6379>
```

- List of commands executed in redis-cli and the outputs showing given stored keys and their values.

```
127.0.0.1:6379> ping
PONG
127.0.0.1:6379> ping "Hello World"
"Hello World"
127.0.0.1:6379> Set Database "In-Memory"
OK
127.0.0.1:6379> get Database
"In-Memory"
127.0.0.1:6379> set User "In-Memory User"
OK
127.0.0.1:6379> get User
"In-Memory User"
127.0.0.1:6379> set Password "none"
OK
127.0.0.1:6379> get Password
"none"
127.0.0.1:6379> KEYS *
1) "User"
```

```
2) "Password"
3) "Database"
127.0.0.1:6379> mget Database User Password
1) "In-Memory"
2) "In-Memory User"
3) "none"
127.0.0.1:6379>
```

- **Using Redis Hashes to get field-value pairs stored in a hash key named Key:Value. HMSET sets multiple fields of the hash, HGETALL retrieves all the stored field-value pairs.**



```
C:\Users\sudha\Desktop\CMPE297\Redis-x64-3.2.100\redis-cli.exe
127.0.0.1:6379> ping
PONG
127.0.0.1:6379> hmset Key:Value Database "In-Memory" User "In-Memory User" Password "none"
OK
127.0.0.1:6379> hgetall Key:Value
1) "Database"
2) "In-Memory"
3) "User"
4) "In-Memory User"
5) "Password"
6) "none"
127.0.0.1:6379>
```