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Course: DSCI 551

Assignment: Week 2 Summary

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Week 2 Summary

This week's topic is about firebase and REST. I think my top gains in this week are CRUD commands in terminal, how to set up real-time database in firebase, and JSON file format. To summarize the specific contents, I will use the following charts to demonstrate.

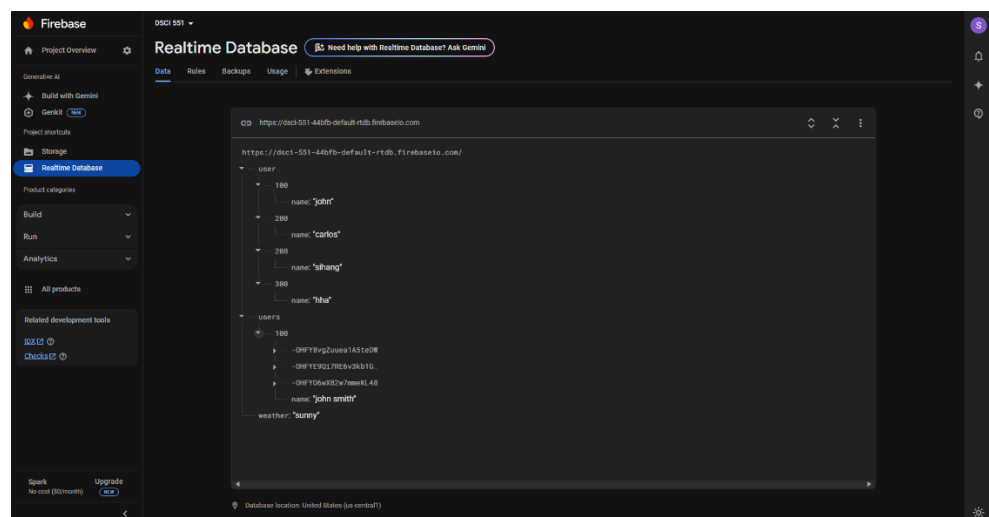
CRUD:

Initial	Definition	Command
C	Create	PUT/POST
R	Retrieve/read	GET
U	Update	PATCH
D	Delete	DELETE

Ordering and filtering

Command	Notation
orderBy="\$key"	This is asking for order by key
orderBy="\$value"	This is asking for order by value
orderBy="name"	This is asking for order by name
startAt=25, endAt=25, equalTo=25, equalTo="john"	This is asking for sorting at a starting, end, or equal
limitToFirst=1, limitToLast=1	This is asking for sorting at earliest or latest

Here are some demonstrations of in-class exercises:



Firebase/JSON:

CRUD commands applications on EC2 terminal:

```
ubuntu@ip-172-31-8-201:~$ curl -X POST https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"-OHPZ2qXsr20soF_GMA"}ubuntu@ip-172-31-8-201:~$ n
n: command not found
ubuntu@ip-172-31-8-201:~$ curl -X POST https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"-OHPZ2f12vDk83zlgMxHP"}ubuntu@ip-172-31-8-201:~$ y
y: command not found
ubuntu@ip-172-31-8-201:~$ curl -X POST https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"-OHPZ2hRurW6-bb-MPdd"}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl -X PUT https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"john smith"}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl -X PATCH https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"john smith"}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl -X PATCH https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john"}'
{"name":"john"}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl -X POST https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100.json -d '{"name": "john smith"}'
{"name":"-OHP 59SFq2x2LFQ1aXp"}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl -X DELETE https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100/--OHP 59SFq2x2LFQ1aXp.json3°C
not foundubuntu@ip-172-31-8-201:~$ curl -X DELETE https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100/--OHP 59SFq2x2LFQ1aXp.json3°C
not foundubuntu@ip-172-31-8-201:~$ curl -X DELETE https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100/--OHP 59SFq2x2LFQ1aXp.json
nullubuntu@ip-172-31-8-201:~$ curl -X DELETE https://dsci-551-44bfb-default-rtdb.firebaseio.com/user/100/--OHP 59SFq2x2LFQ1aXp.json3°C
not foundubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl 'https://dsci-551-44bfb-default-rtdb.firebaseio.com/user.json?orderBy="$key"&startAt="200"'
{"200":{"name":"carlos"},"208":{"name":"sihang"},"300":{"name":"hha"}}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl 'https://dsci-551-44bfb-default-rtdb.firebaseio.com/user.json?orderBy="$key"&startAt="200"'
{"200":{"name":"carlos"},"208":{"name":"sihang"},"300":{"name":"hha"}}ubuntu@ip-172-31-8-201:~$
https://pythontutor.com/python-compiler.html... 1 'https://dsci-551-44bfb-default-rtdb.firebaseio.com/user.json?orderBy="$key"&startAt="200"&endAt="300"'
{"200":{"name":"carlos"},"208":{"name":"sihang"},"300":{"name":"hha"}}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl 'https://dsci-551-44bfb-default-rtdb.firebaseio.com/user.json?orderBy="$key"&startAt="200"&endAt="300"&limitAt
last=1'
{"200":{"name":"carlos"},"208":{"name":"sihang"},"300":{"name":"hha"}}ubuntu@ip-172-31-8-201:~$
ubuntu@ip-172-31-8-201:~$ curl 'https://dsci-551-44bfb-default-rtdb.firebaseio.com/user.json?orderBy="$key"&equalTo="200"'
{"100":{"name":"john"},"200":{"name":"carlos"},"208":{"name":"sihang"},"300":{"name":"hha"}}ubuntu@ip-172-31-8-201:~$
```

Some challenges:

When I was trying to curl the JSON file in firebase, I firstly found that the return said “permission denied”. I thought I missed something by professor. After checking the internet, I found that I need to change the rules in realtime database to permit read and write.

```
1 {
2   "rules": {
3     ".read": true,
4     ".write": true,
5     "newdata":
6       {"users": {".indexOn": "name"}}
7   }
8 }
```

I think this week's content is a really good starting point for me to gain more knowledge about terminal and coding. I will do some extra exercises to enhance my ability.