

Java Database Connectivity (JDBC)

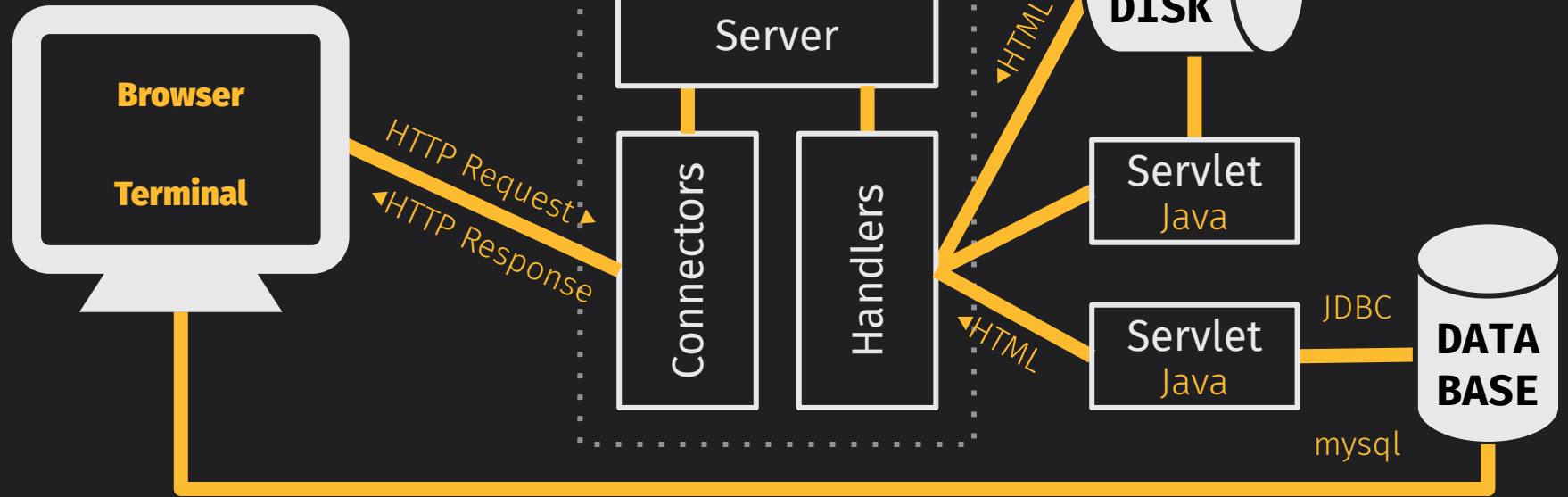
CS 272 Software Development

Java Database Connectivity (JDBC)

- Java API to access relational databases
 - See `java.sql` and `javax.sql` packages
- Requires a "driver" for specific DBMS
 - `MariaDB*`, MySQL, Oracle, Postgres, etc.
- Useful for database-backed web applications

<https://www.cs.usfca.edu/~cs272/javadoc/api/java.sql/module-summary.html>





On-Campus Database

- Connect to **sql.cs.usfca.edu** via **stargate.cs.usfca.edu**
 - Login via **ssh** and use mysql in terminal
 - Login via **database.properties** and use JDBC
(requires MariaDB driver, included in pom.xml)
- Never hardcode passwords in code!

<https://www.cs.usfca.edu/~cs272/javadoc/api/java.sql/module-summary.html>



Off-Campus Configuration

```
ssh username@stargate.cs.usfca.edu  
    -L 3307:sql.cs.usfca.edu:3306 -N
```

username=**user###**

database=**user###**

password=**????**

hostname=localhost:3307

database.properties



SSH Tunnel



localhost:3307



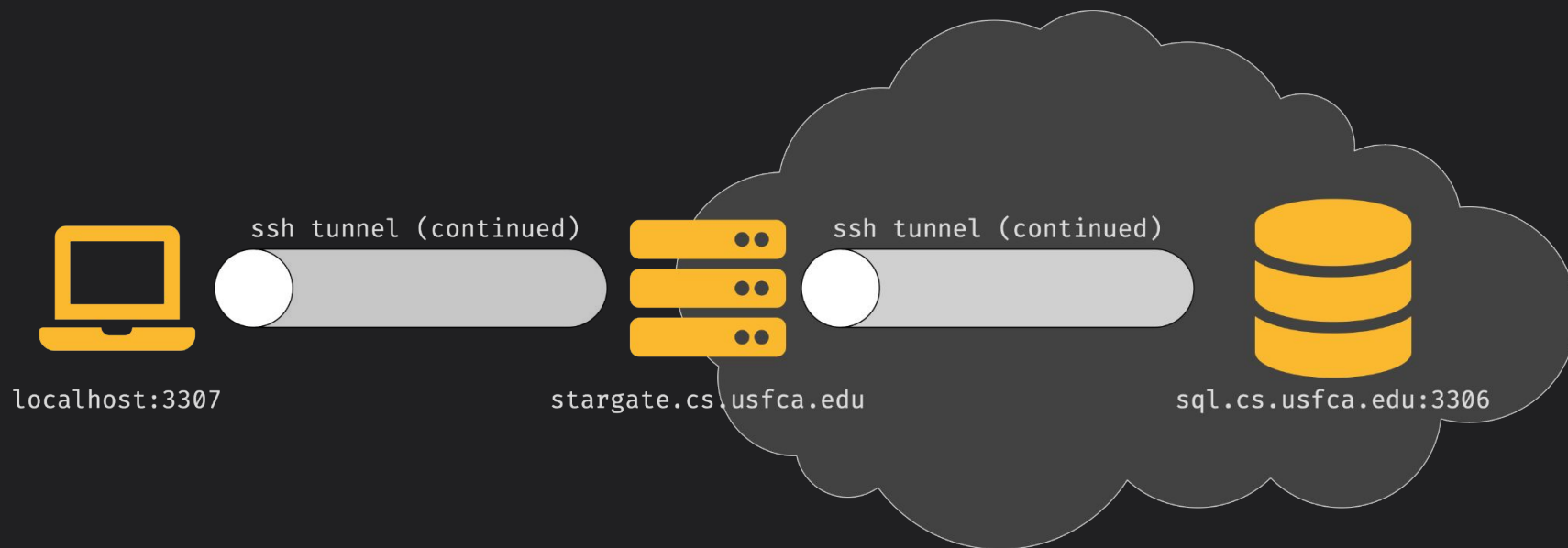
stargate.cs.usfca.edu



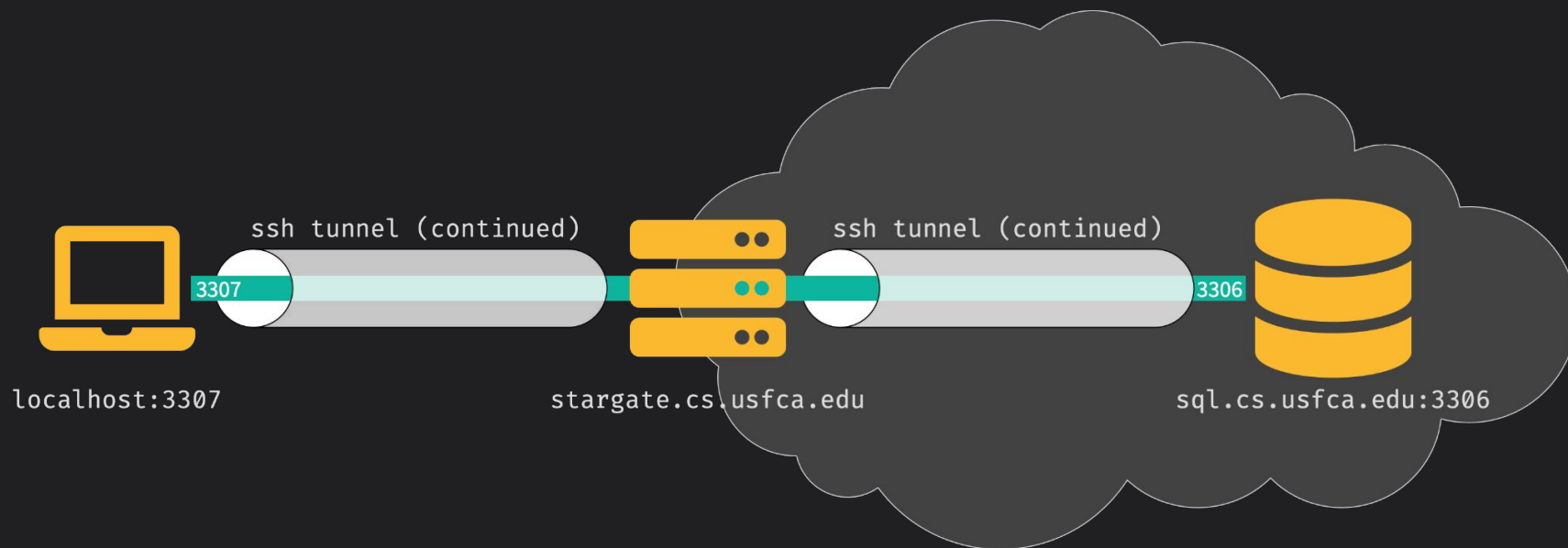
sql.cs.usfca.edu:3306



SSH Tunnel



SSH Tunnel



Off-Campus Configuration

```
ssh username@stargate.cs.usfca.edu  
    -L 3307:sql.cs.usfca.edu:3306 -N
```

```
username=user###
```

```
database=user###
```

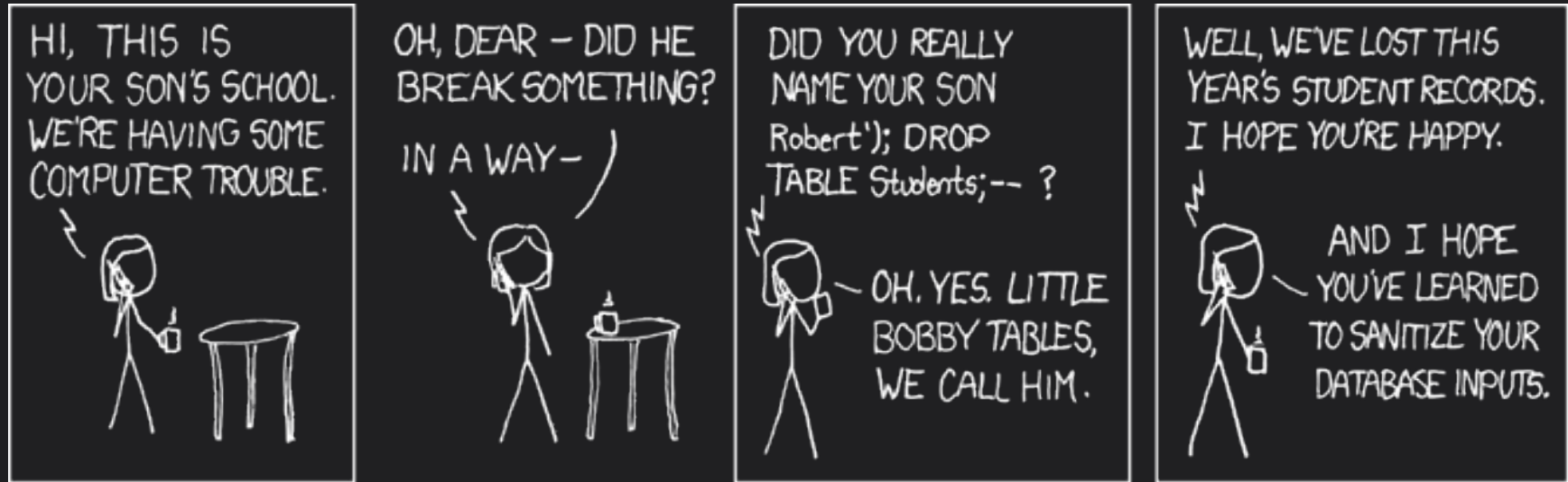
```
password=????
```

```
hostname=localhost:3307
```

} **database.properties**



Never Forget Bobby Tables!



<https://xkcd.com/327/>

Questions?

