

# Java Database Connectivity (JDBC)

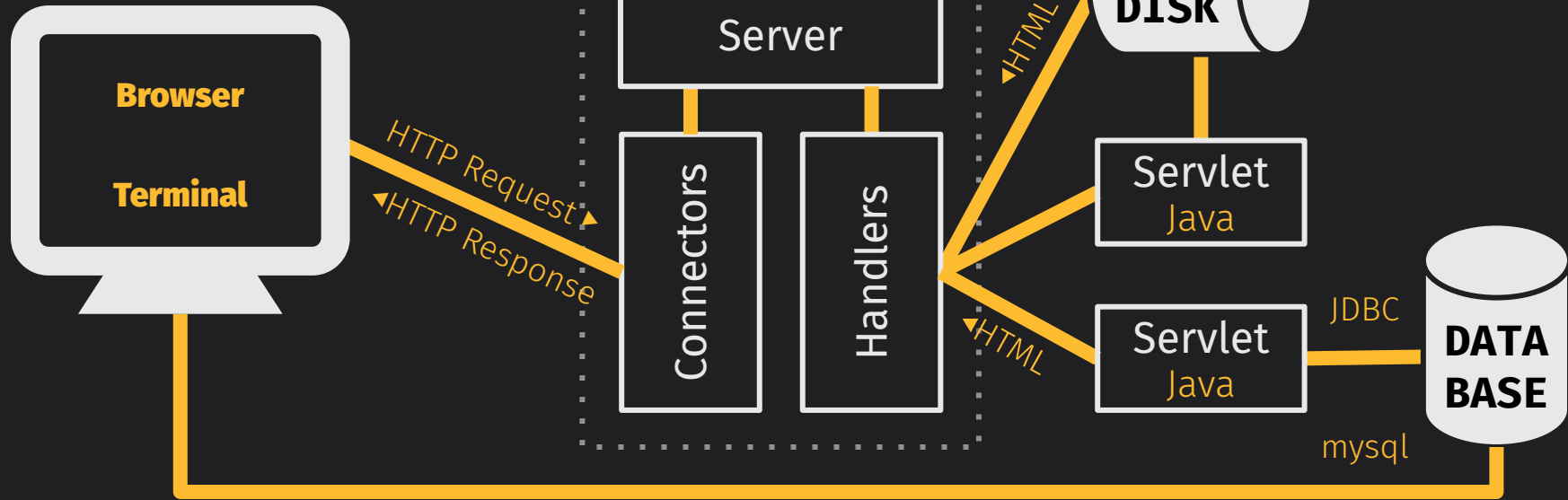
CS 272 Software Development

# 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



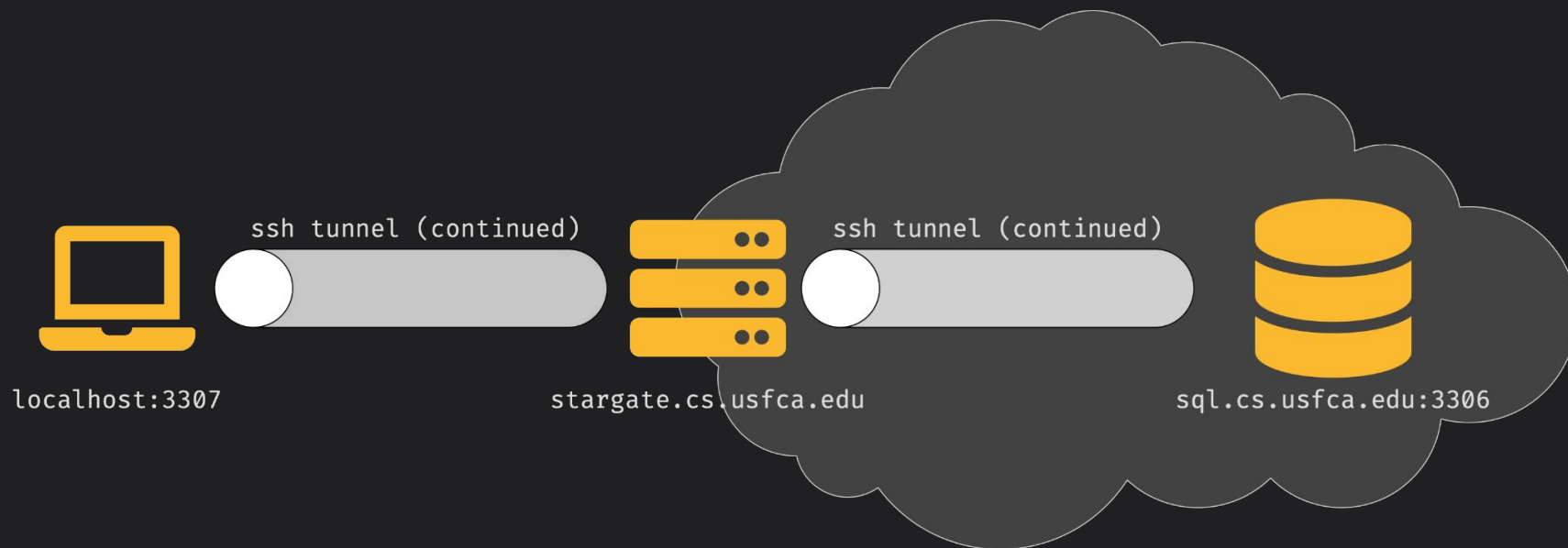
stargate.cs.usfca.edu



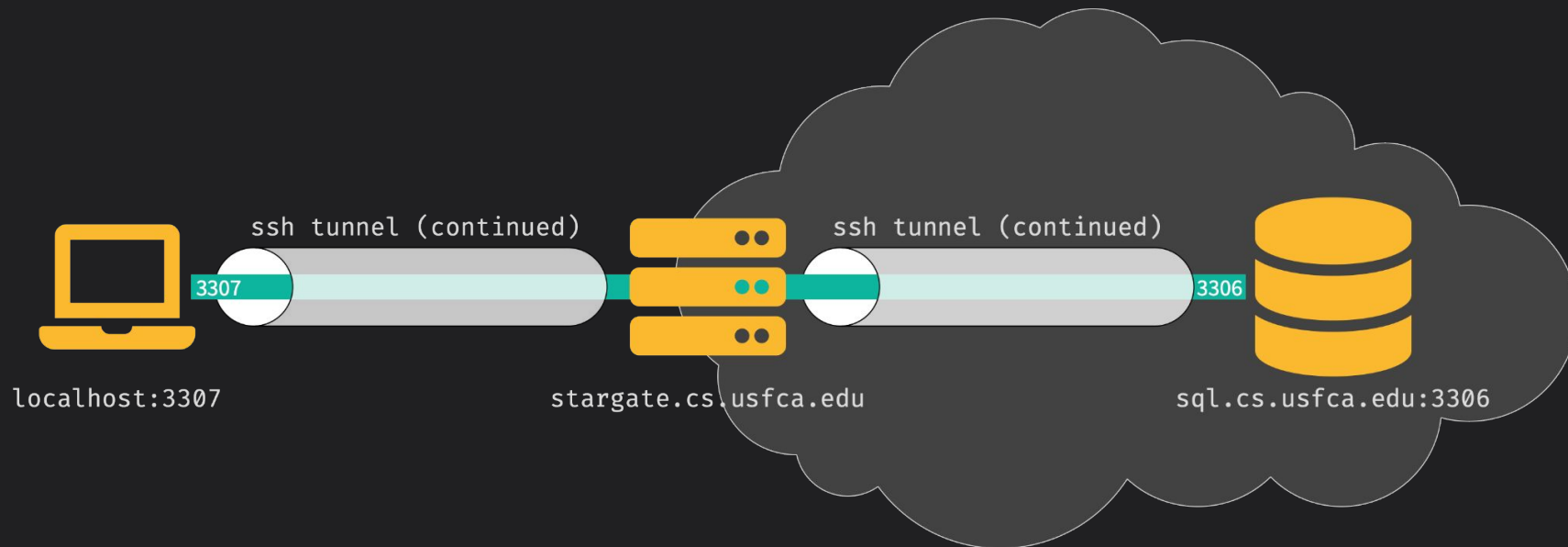
sql.cs.usfca.edu:3306



# 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###
```

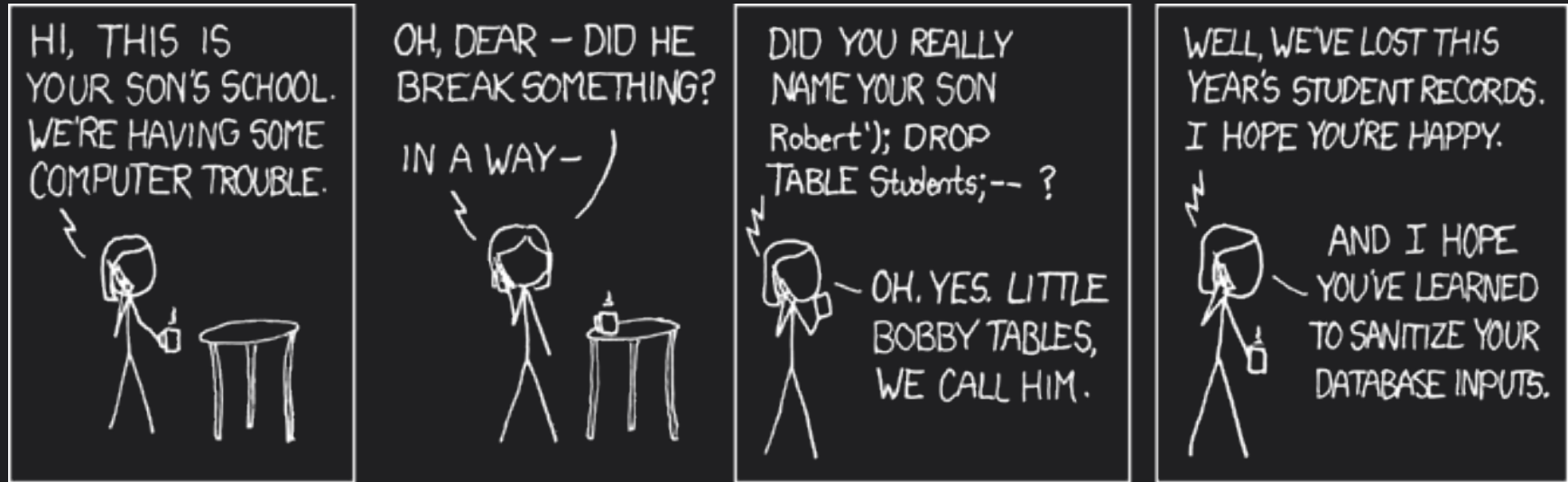
```
password=????
```

```
hostname=localhost:3307
```

} **database.properties**



# Never Forget Bobby Tables!



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

# Questions?

