

# IS-664 Database Programming Fall 2022 hlocklear@pace.edu

EXAM

## Practice Exam

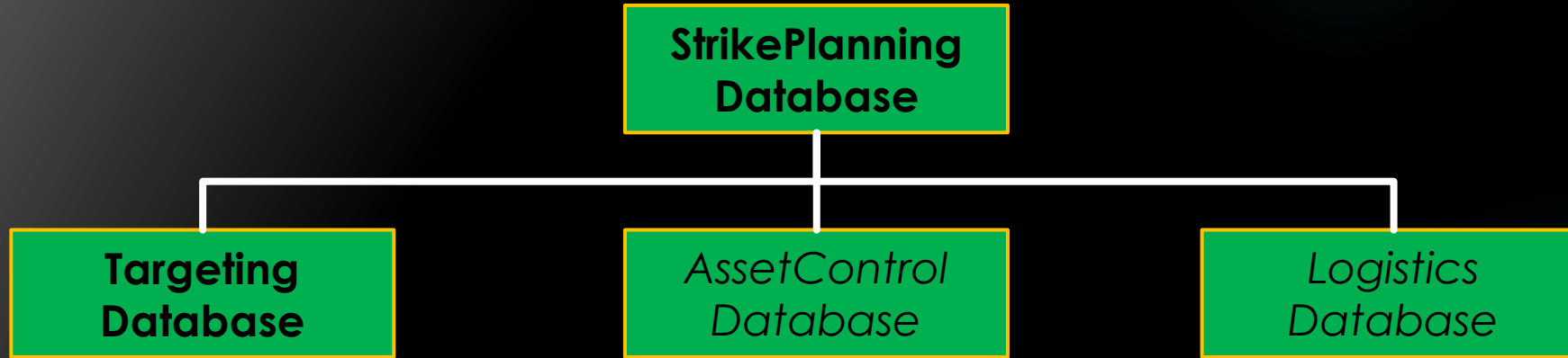
DATABASE FUNDAMENTALS AND STORED PROGRAMS

Professor HG Locklear

- ▶ **This is your practice exam** it is worth 10 points toward an incorrect solution on the Midterm Exam.
- ▶ It is designed to evaluate your understanding of fundamental database concepts and the use of Stored Programs in MySQL.
- ▶ Submit your solution as a single **.sql** file.
- ▶ **Read all instruction carefully and follow them exactly.**
- ▶ This practice exam is due at **6 PM October 27<sup>th</sup>**...you **must** submit before this deadline to receive any points.

# General

3



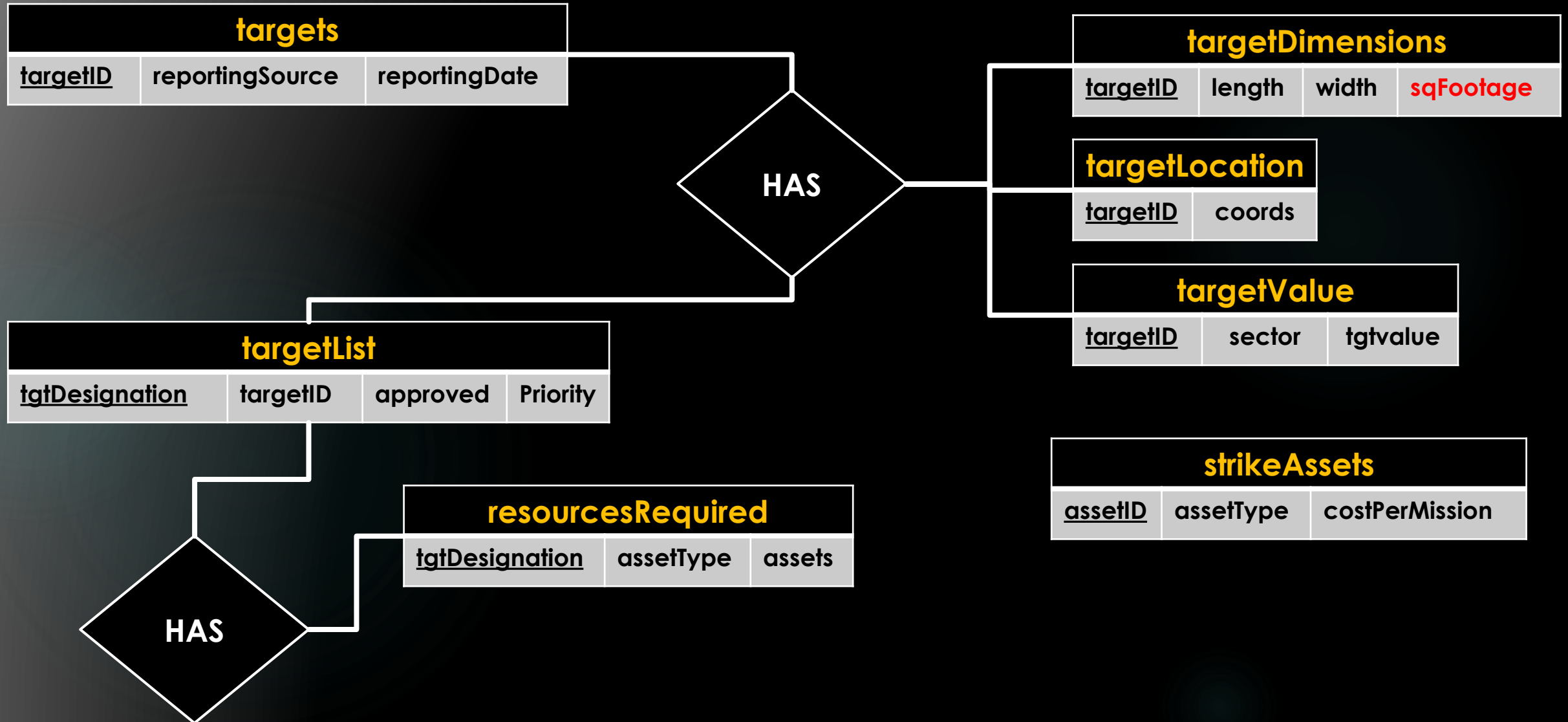
You have been tasked to create and populate the **Targeting** database by creating and using the procedures on the slide 6.

Once you have created the **populate\_Targeting** procedure, execute the provided **strikeplanningPOP.sql** script to populate the targeting database.

You **must perform all tasks** while in the **StrikePlanning** database as the **Targeting** database is restricted to indirect access only.

# Targeting Database

4



# Targeting Database

5

MySQL 8.0 Command Line Client

```
mysql> describe targeting.targets;
```

Field	Type	Null	Key	Default	Extra
targetID	varchar(50)	NO	PRI	NULL	
reportingSource	enum('Satellite','Ground Observer','Airborne Observer')	YES		NULL	
reportingDate	date	YES		NULL	

3 rows in set (0.02 sec)

```
mysql> describe targeting.targetdimensions;
```

Field	Type	Null	Key	Default	Extra
targetID	varchar(50)	NO	PRI	NULL	
length	decimal(10,2)	YES		NULL	
width	decimal(10,2)	YES		NULL	
sqFootage	decimal(10,2)	YES		NULL	STORED GENERATED

4 rows in set (0.00 sec)

```
mysql> describe targeting.targetlocation;
```

Field	Type	Null	Key	Default	Extra
targetID	varchar(50)	NO	PRI	NULL	
coords	json	YES		NULL	

2 rows in set (0.00 sec)

```
mysql> describe targeting.targetvalue;
```

Field	Type	Null	Key	Default	Extra
targetID	varchar(50)	NO	PRI	NULL	
sector	enum('North','East','West','South')	YES		NULL	
tgtValue	decimal(10,2)	YES		NULL	

3 rows in set (0.00 sec)

```
mysql>
```

MySQL 8.0 Command Line Client

```
mysql> describe targeting.targetlist;
```

Field	Type	Null	Key	Default	Extra
tgtDesignation	varchar(50)	NO	PRI	NULL	
targetID	varchar(50)	YES	UNI	NULL	
approved	tinyint(1)	YES		NULL	
priority	enum('Immediate','High','Routine')	YES		NULL	

4 rows in set (0.00 sec)

```
mysql> describe targeting.resourcesrequired;
```

Field	Type	Null	Key	Default	Extra
tgtDesignation	varchar(50)	NO	PRI	NULL	
assetType	varchar(50)	YES		NULL	
assets	int	YES		NULL	

3 rows in set (0.00 sec)

```
mysql> describe targeting.strikeassets;
```

Field	Type	Null	Key	Default	Extra
assetID	varchar(50)	NO	PRI	NULL	
assetType	varchar(50)	YES		NULL	
costPerMission	decimal(10,2)	YES		NULL	

3 rows in set (0.00 sec)

```
mysql>
```

# Task 1

6

- ▶ Create the stored procedure **build\_Targeting** which creates the **Targeting** database according to the schema on slide 4 and slide 5. *Be sure to incorporate all required constraints indicated by the scheme.*

# Task 2

- ▶ Create the stored procedure **populate\_Targeting** which accepts a single JSON Object that represents data for the tables in the **Targeting** database. *Examine the **strikeplanningPOP.sql** script to see the configuration of the JSON object.*

# Task 3

- ▶ Create the stored procedure **display\_Targeting** which accepts a single table name, for a table in the **Targeting** database, and displays the structure and all data for that table.