

# Managing Privileges

# Managing Privileges

**Two types of Oracle user privileges:**

- **System: Enables users to perform particular actions in the database**
- **Object: Enables users to access and manipulate a specific object**

# System Privileges

- **There are more than 100 distinct system privileges.**
- **The ANY keyword in privileges signifies that users have the privilege in any schema.**
- **The GRANT command adds a privilege to a user or a group of users.**
- **The REVOKE command deletes the privileges.**

# System Privileges: Examples

Category	Examples
INDEX	CREATE ANY INDEX ALTER ANY INDEX DROP ANY INDEX
TABLE	CREATE TABLE CREATE ANY TABLE ALTER ANY TABLE DROP ANY TABLE SELECT ANY TABLE UPDATE ANY TABLE DELETE ANY TABLE
SESSION	CREATE SESSION ALTER SESSION RESTRICTED SESSION
TABLESPACE	CREATE TABLESPACE ALTER TABLESPACE DROP TABLESPACE UNLIMITED TABLESPACE

# Granting System Privileges

- Use the **GRANT** command to grant system privileges.
- Grantee can further grant the system privilege with **ADMIN** option.

```
GRANT CREATE SESSION TO emi ;
```

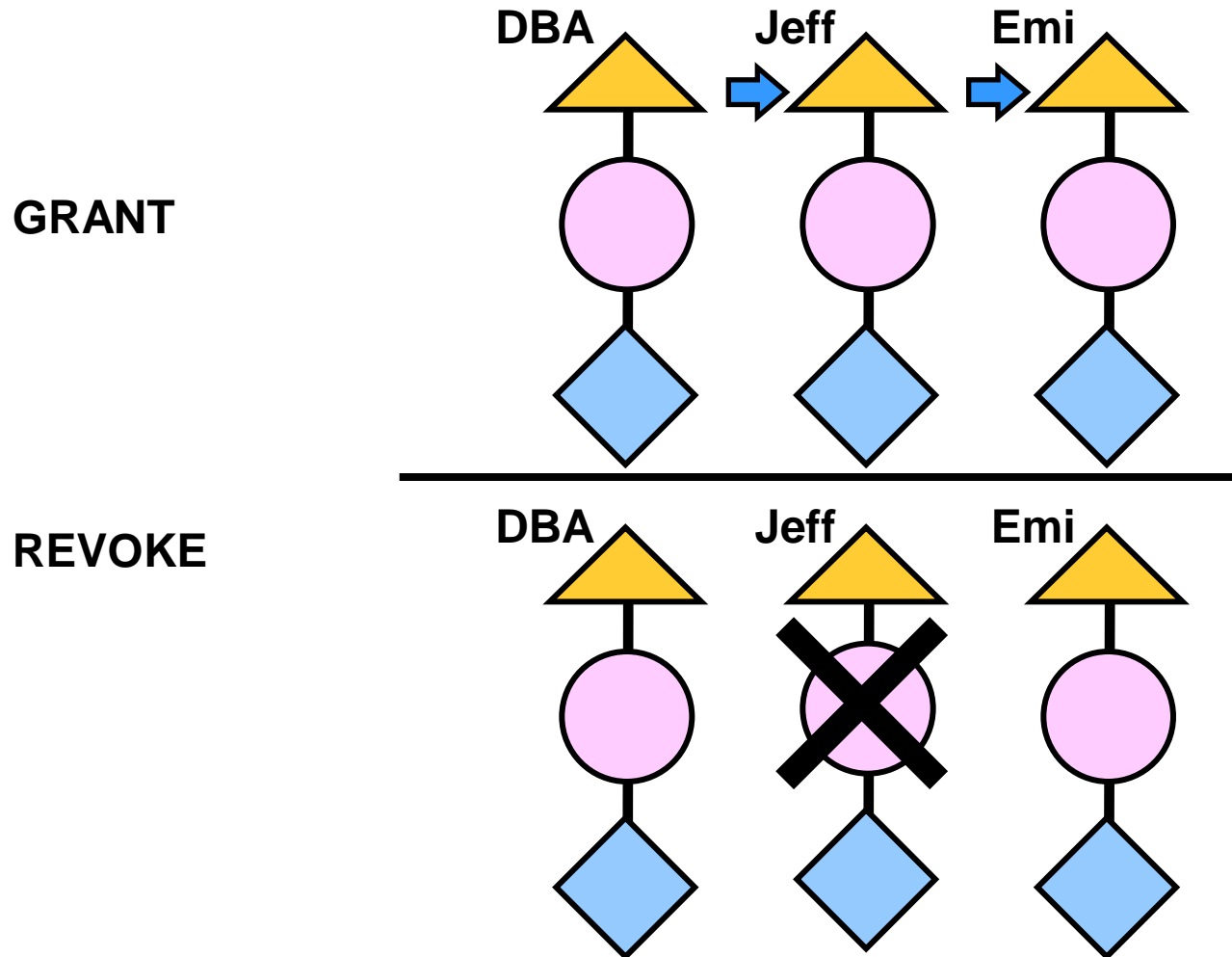
```
GRANT CREATE SESSION TO emi WITH ADMIN OPTION ;
```

# Revoking System Privileges

- Use the **REVOKE** command to remove a system privilege from a user.
- Users with **ADMIN OPTION** for system privilege can revoke system privileges.
- Can only revoke privileges granted with a **GRANT** command.

```
REVOKE CREATE TABLE FROM emi ;
```

# Revoking System Privileges with the ADMIN OPTION



# Object Privileges

Object priv.	Table	View	Sequence	Procedure
ALTER	√	√	√	√
DELETE	√	√		
EXECUTE				√
INDEX	√	√		
INSERT	√	√		
REFERENCES	√			
SELECT	√	√	√	
UPDATE	√	√		

# Granting Object Privileges

- Use the **GRANT** command to grant object privileges.
- Grant must be in grantors schema or grantor must have **GRANT OPTION**.

```
GRANT EXECUTE ON dbms_output TO jeff;
```

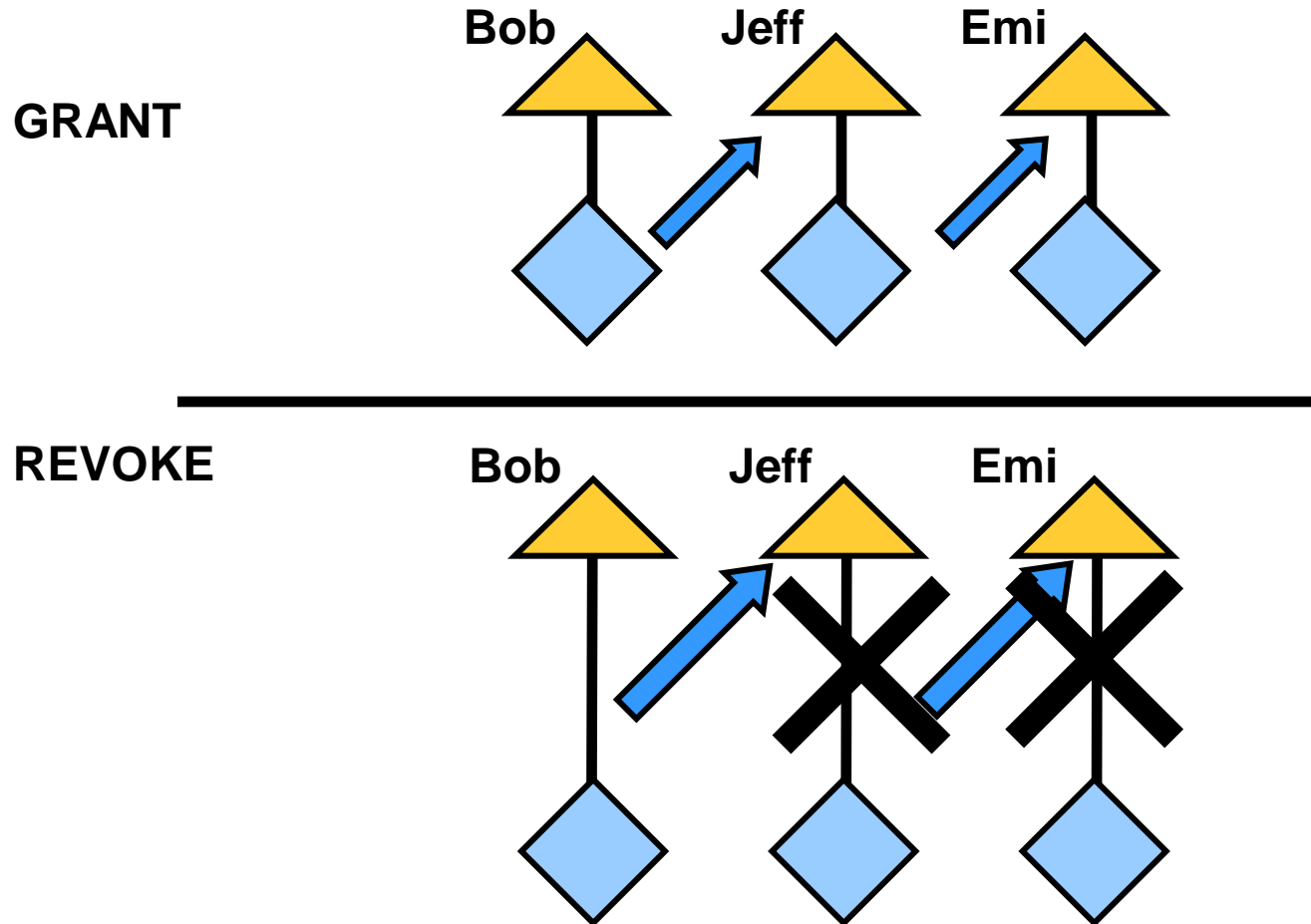
```
GRANT UPDATE ON emi.customers TO jeff WITH  
GRANT OPTION;
```

# Revoking Object Privileges

- Use the **REVOKE** command to revoke object privileges.
- User revoking the privilege must be the original grantor of the object privilege being revoked.

```
REVOKE SELECT ON emi.orders FROM jeff;
```

# Revoking Object Privileges WITH GRANT OPTION



# Obtaining Privileges Information

Information about privileges can be obtained by querying the following views:

- `DBA_SYS_PRIVS`
- `SESSION_PRIVS`
- `DBA_TAB_PRIVS`
- `DBA_COL_PRIVS`

# Summary

**In this lesson, you should have learned how to:**

- **Identify system and object privileges**
- **Grant and revoke privileges**