

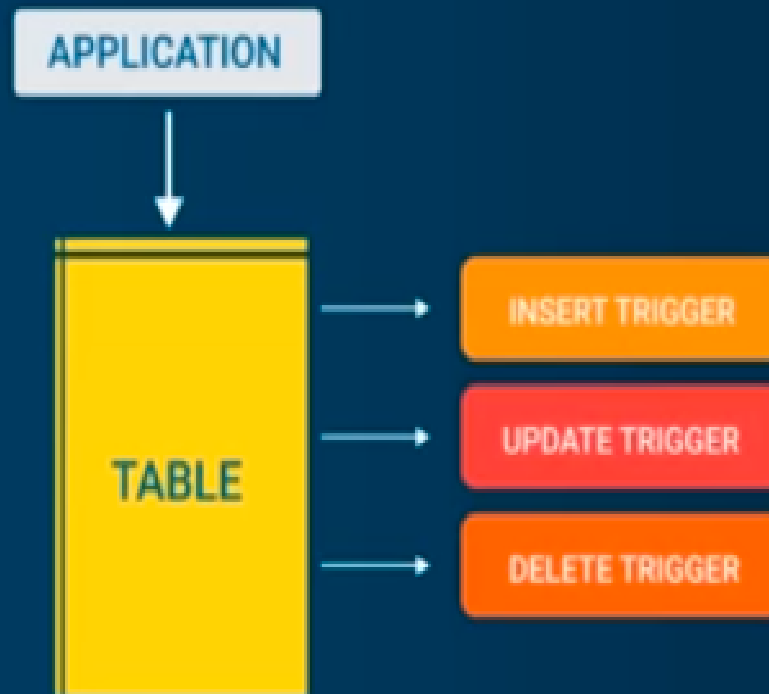
AGENDA

WHAT IS A TRIGGER?

SYNTAX AND EXAMPLE

OPERATION ON TRIGGERS

ADVANTAGES AND DISADVANTAGES



What is a TRIGGER?

Triggers are the SQL codes that are automatically executed in response to certain events on a particular table. These are used to maintain the integrity of the data.

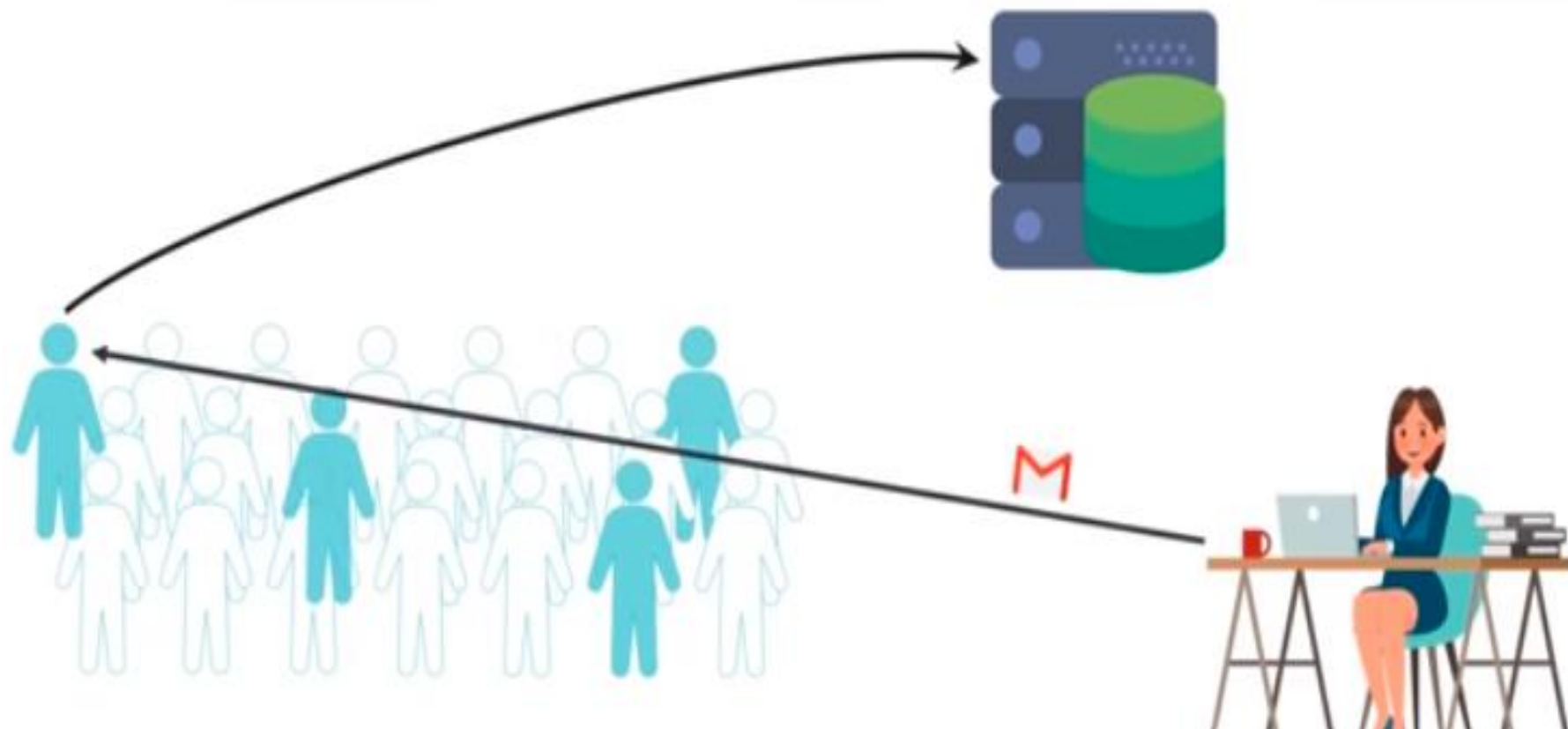
Triggers in SQL

Triggers are stored programs / procedures , which are automatically executed or fired when some events occur. Events can be any of the following –

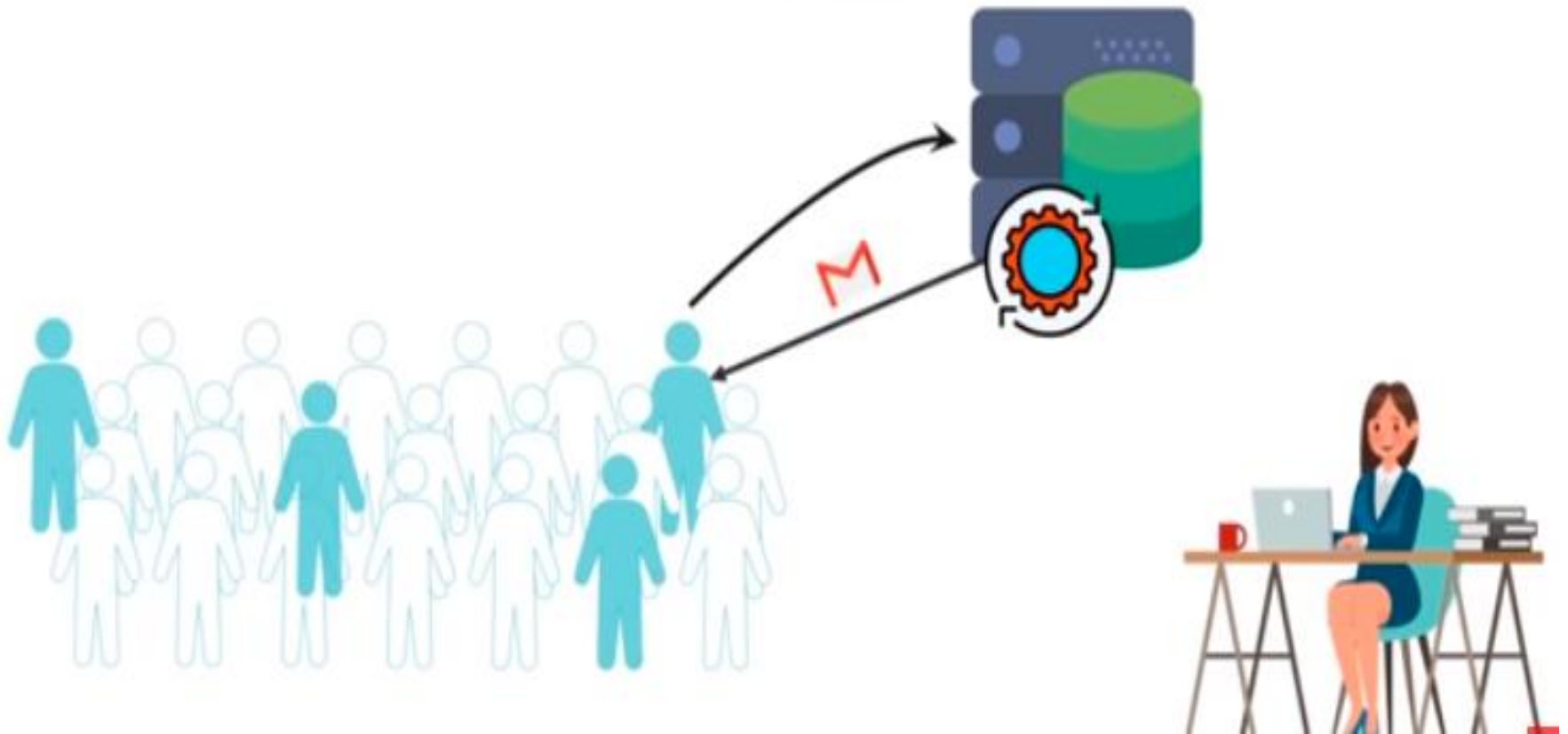
- **1. Database manipulation (DML):** statement like - DELETE, INSERT, or UPDATE)
- **2. Database definition (DDL)** : statement like - CREATE, ALTER, or DROP
- **3. Database operation** : like - LOGON, LOGOFF, STARTUP, or SHUTDOWN

Triggers can be defined on the table, view, schema, or database with which the event is associated.

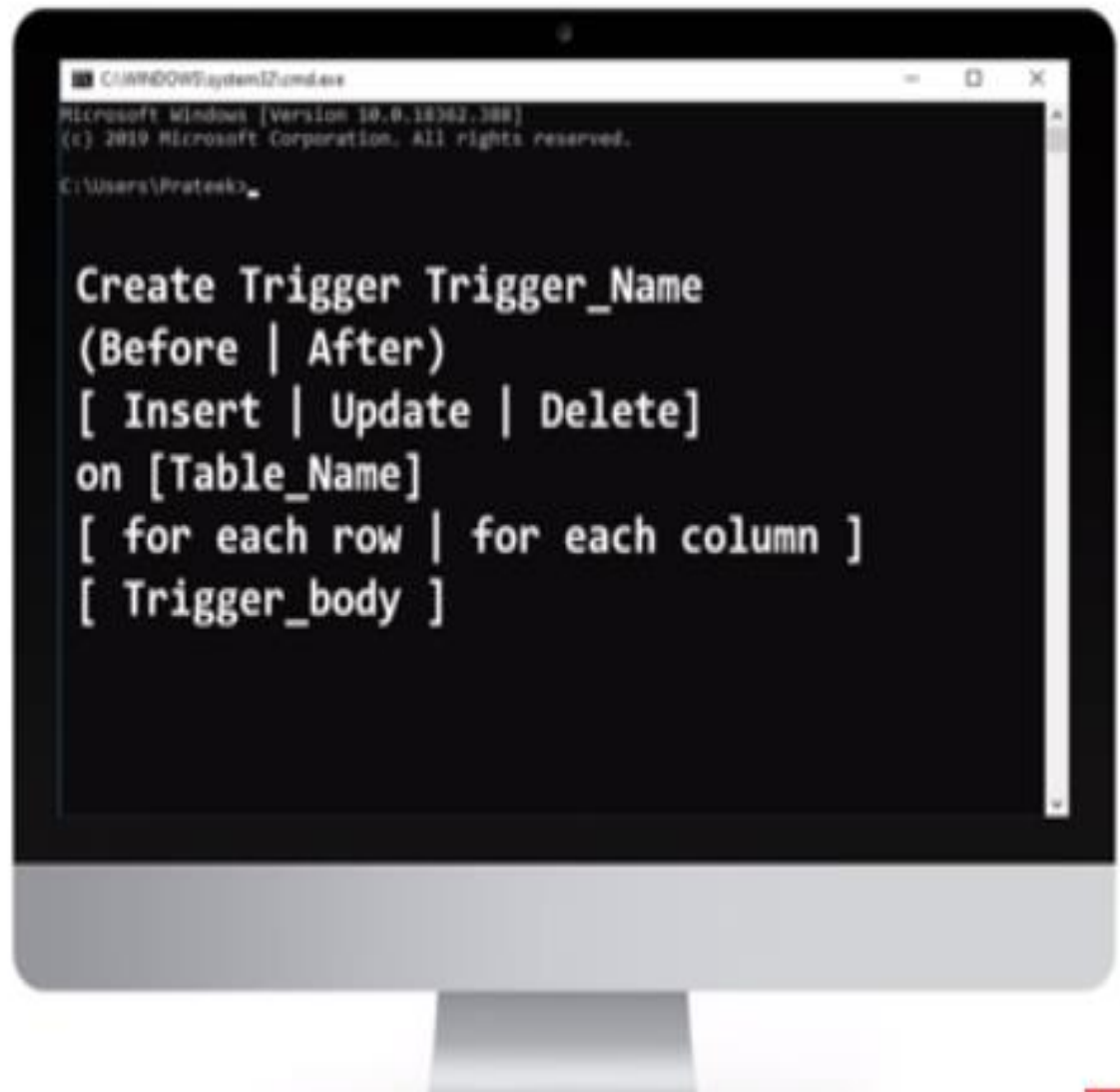
PROBLEM WITHOUT TRIGGER



SOLUTION



SYNTAX OF TRIGGER



C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.18362.388]
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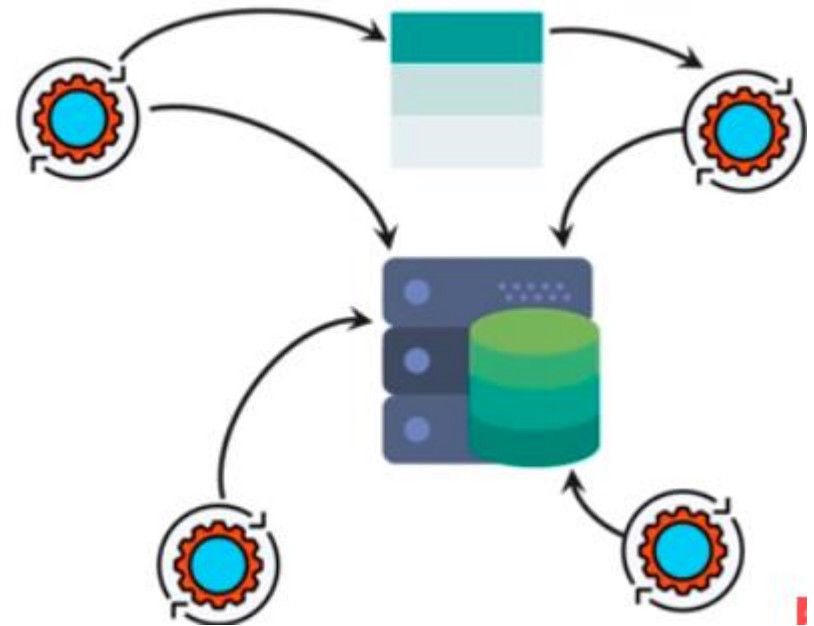
C:\Users\Prateek>

```
CREATE TRIGGER sample_trigger  
before INSERT  
ON student  
FOR EACH ROW  
SET new.marks = new.marks+6;
```

EXAMPLE OF TRIGGER

NESTED TRIGGERS

Nested Triggers in SQL are the actions that automatically executed when a certain database operation is performed



DROP

We can use DROP command to remove a trigger from the database

SYNTAX:

```
DROP TRIGGER trigger name;
```

EXAMPLE:

```
DROP TRIGGER calculate name;
```

DISPLAY

We can use SHOW
command to display
triggers from the
database

SYNTAX:

```
SHOW TRIGGERS  
IN database_name;
```

INSERT

Before Insert
Triggers are used
to update or
validate record
values before
they're saved to
the database

SYNTAX:

```
CREATE TRIGGER calculate  
before INSERT  
ON student  
FOR EACH ROW  
SET new.marks = new.marks+100;
```

INSERT

After Insert
Triggers are used
to access field
values that are set
by the system and
to effect changes
in other records

SYNTAX:

```
CREATE TRIGGER total_mark  
after insert  
ON student  
FOR EACH ROW  
insert into Final_mark values(new.marks);
```

Benefits of Triggers

Triggers can be written for the following purposes –

- Gain strong Control over Security
- Enforcing referential integrity
- Event logging and storing information on table access
- Auditing
- Synchronous replication of tables
- Preventing invalid transactions

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ADVANTAGE & DISADVANTAGE



ADVANTAGE & DISADVANTAGE

