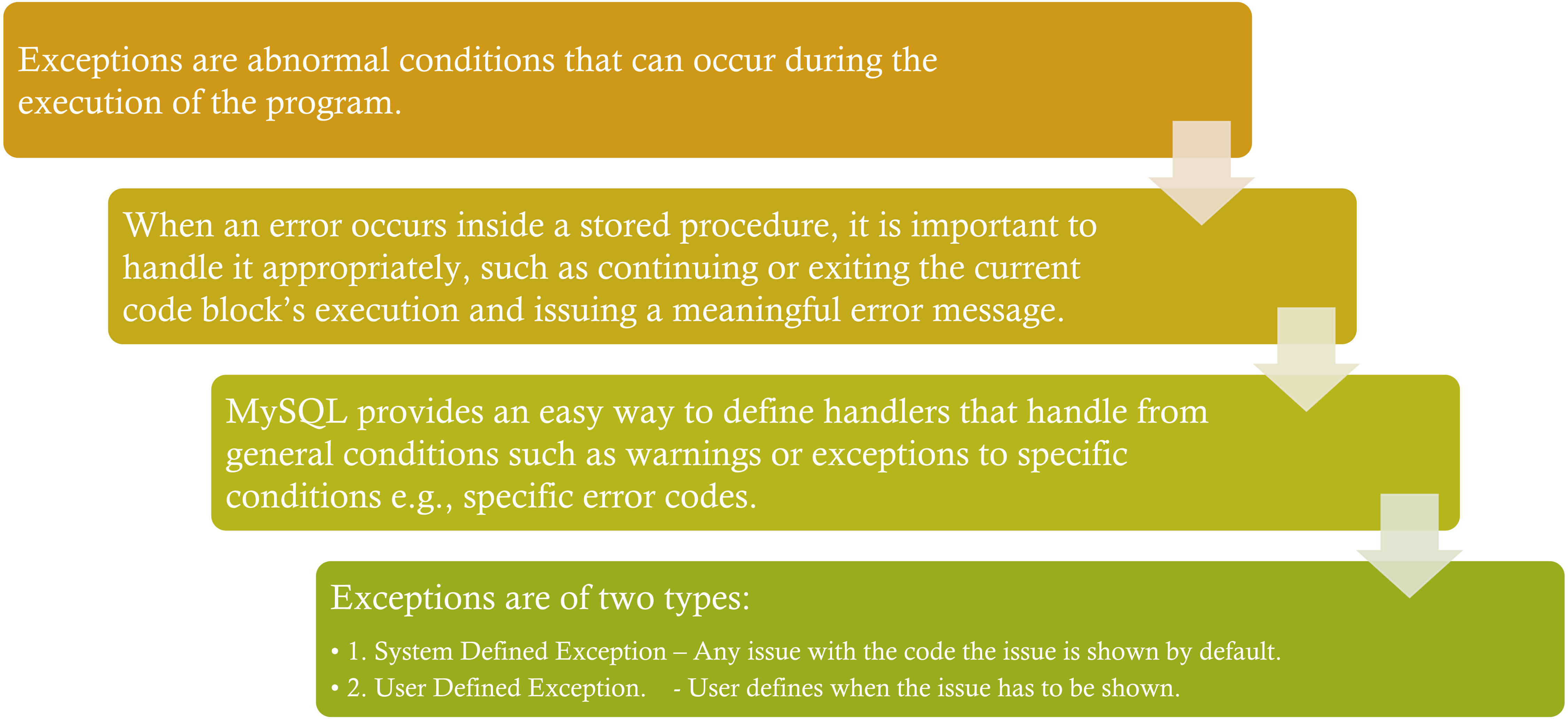
EXCEPTION HANDLING

WHAT IS EXCEPTION



Exceptions are abnormal conditions that can occur during the execution of the program.

When an error occurs inside a stored procedure, it is important to handle it appropriately, such as continuing or exiting the current code block's execution and issuing a meaningful error message.

MySQL provides an easy way to define handlers that handle from general conditions such as warnings or exceptions to specific conditions e.g., specific error codes.

Exceptions are of two types:

- 1. System Defined Exception – Any issue with the code the issue is shown by default.
- 2. User Defined Exception.   - User defines when the issue has to be shown.

- To handle exceptions in a block of code we need to declare a HANDLER.

- HANDLER is just a mechanism to handle logical errors and display a meaningful message

- A handler is declared in the below manner:

- Declare <ACTION> handler for <CONDITION VALUE>

- In the above query you can see that we need to declare an action that needs to be taken whenever an exception is encountered. There are two action that can be taken.

  - CONTINUE : If an exception is encountered please do not stop the execution of the code.
  - EXIT : If an exception is encountered please stop the execution of the code.

- After declaring the ACTION, you need to tell the system what needs to be done for the exception. There are three things that can be done.

1. A MYSQL ERROR CODE (E.G. 1062)

2. A STANDARD SQLSTATE VALUE OR IT CAN BE SQLWARNING, NOTFOUND ERROR, SQL EXCEPTION

3. A NAMED CONDITION ASSOCIATED WITH MYSQL ERROR CODE OR SQL STATEVALUE

Let’s suppose I am writing a procedure to select data from table (Employees table is there in the database however there is no test table). Refer to the query below.

```
DELIMITER //
CREATE PROCEDURE TESTING()
BEGIN
DECLARE CONTINUE HANDLER FOR 1146
SELECT 'PLEASE CREATE THE TABLE FIRST AS IT DOES NOT EXIST' MESSAGE;
SELECT * FROM TEST;
SELECT * FROM EMPLOYEES;
END //
DELIMITER ;
```

1146 is a pre-defined error code in MySQL which occurs when you call a table which is not present in database.

So, if you call this procedure as CALL TESTING() you will see to outputs one will show the error message written in the query and the second one will show the Employees table (because of CONTINUE HANDLER)

I have written a query to select data from test table and employees table. I have declared the exception as well that if in case any table is not found in the database please return a message as ‘Please create the table first as it does not exist’

On the other hand, as you can see I have declared a CONTINUE handler it means if a table is not found display the message and move to the next line of code do not stop the execution of the code.

Let’s suppose I am writing a procedure to select data from table (Employees table is there in the database however there is no test table). Refer to the query below.

```
DELIMITER //
CREATE PROCEDURE TESTING()
BEGIN
DECLARE EXIT HANDLER FOR 1146
SELECT 'PLEASE CREATE THE TABLE FIRST AS IT DOES NOT EXIST' MESSAGE;
SELECT * FROM TEST;
SELECT * FROM EMPLOYEES;
END //
DELIMITER ;
```

1146 is a pre-defined error code in MySQL which occurs when you call a table which is not present in database.

So, if you call this procedure as CALL TESTING() you will see the error message written in the query and nothing else (because of EXIT handler). Code did not move to the next line.

I have written a query to select data from test table and employees table. I have declared the exception as well that if in case any table is not found in the database please return a message as ‘Please create the table first as it does not exist’

On the other hand, as you can see I have declared a EXIT handler it means if a table is not found display the message and stop the execution of the code. (DO NOT PROCEED)