

Daily Assessment Journal

Date: 11/06/2020

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Course: PCB design using KiCad

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Topic: Add footprint search path
prepare production files

Github
repository: jyoti-course

forenoon session details

Report

Add footprint search path

- When creating a custom PCB footprint for a component, it is stored somewhere on your computer. In order for design entry CIs to find where a custom footprint is stored & associate it with a schematic component, the library search path must be changed so that design entry CIs know where to look.
- Save your custom footprints in the symbols folder on your computer, depending on how cadence is installed on your computer.
- Depending on how cadence is installed on your computer, the full path should be similar to: `c:\cadence\SPB-Data-silent\cdsetup\orCAD_capture\17.2.01\capture.ini` or, if you made a custom Home variable: `%HOME%\cdsetup\orCAD_capture\17.2.01\capture.ini`. The `capture.ini` file will open in notepad.

What is Gerber file?

- The most widely used file format for PCB manufacturing is called Gerber. When manufacturers request "Gerber" or "Gerber files", they are referring to ASCII files that contain Gerber-formatted data.

- A Gerber file knows nothing about design rules, connectivity or component libraries. It is simply the dimensional artwork that indicates where the manufacturing equipment will place copper, solder mask, or silkscreen.
- One Gerber file provides information for one file format on one layer. Thus, if you have a two-layer board, if each side has copper, solder mask, & silkscreen you will need six Gerber files.
- Generating Gerber files can be somewhat complicated. The process involves various configuration details, & different manufacturers have different requirements.

The drill file

- You will also need to generate a file that indicates the position and size of every hole that will be drilled through your board, i.e., both through-holes & vias.
- This is called the NC (numerical control) drill file. You can look for a PCB manufacturer that accepts your CAD software project files.

Project files vs manufacturing files

- If you'd prefer to avoid generating any type of manufacturing file, you can look for a PCB manufacturer that accepts your CAD software's project file. I assume that the manufacturer uses some sort of automated procedure to generate Gerbers from the project file. This is beneficial not only because it saves you time but also because the fab house technicians will (presumably) know exactly how to generate files that are compatible with their equipment.

Date: 11/06/2020

Course: MySQL

Topic: Insert data into MySQL
• MySQL joins, inner join,
right join, left join

Github
Repository: jyoti-courses

Afternoon session details

Report

Insert data into MySQL

After a database and a table have been created, we can start adding data in them.

Here are some syntax rules to follow

- the SQL query must be quoted in PHP
- string values inside the SQL query must be quoted
- Numeric values must not be quoted
- the word NULL must not be quoted.

The INSERT INTO statement is used to add new records to MySQL table:

INSERT INTO table_name (column1, column2, ...) VALUES (value1, value2, ...)

In this we created an empty table named "myGuests" with five columns: "id", "first name", Now, let us fill the table with data

The following ex: add a new record to the "myGuest" table

```
<?php  
$servername="localhost";  
$username="username";  
$password="password";  
$dbname="myDB";
```

// create connection

```
$conn=new mysqli($servername,$username,$password,  
$dbname);
```

// check connection

```
if ($conn->connect_error) {  
    die("connection failed: " . $conn->connect_error);  
}  
$sql = "INSERT INTO myGuests (firstname, lastname, email)  
VALUES ('John', 'Doe', 'john@ex.com')";  
if ($conn->query($sql) == TRUE) {  
    echo "New record created successfully";  
} else {  
    echo "Error: " . $sql . "<br>";  
}  
$conn->close();  
?>
```

MySQL joins:

This MySQL tutorial explains how to use MySQL joins with syntax, visual illustrations

Description

there are different types of MySQL joins:

- MySQL INNER JOIN
- MySQL LEFT OUTER JOIN
- MySQL RIGHT OUTER JOIN

INNER JOIN (simple join)

chances are, you've already written a statement that uses a MySQL inner join. it is the most common type of join. MySQL inner join returns all rows from multiple tables where the join condition is met

This MySQL inner join ex: would return all rows from the suppliers & orders tables where there is a matching supplier_id value in both the suppliers & orders tables.

LEFT JOIN

The left join keyword returns all records from the left table & the matched records from the right table. The result is NULL from the right side if there is no match.

Syntax

```
SELECT column_name(s)
FROM table1
LEFT JOIN table2
ON table1.column_name = table2.column_name;
```

RIGHT JOIN

The RIGHT JOIN keyword returns all records from the right table, and the matched records from the left table. The result is NULL from the left side, when there is no match.

Syntax

```
SELECT column_name(s)
FROM table1
RIGHT JOIN table2
ON table1.column_name = table2.column_name;
```