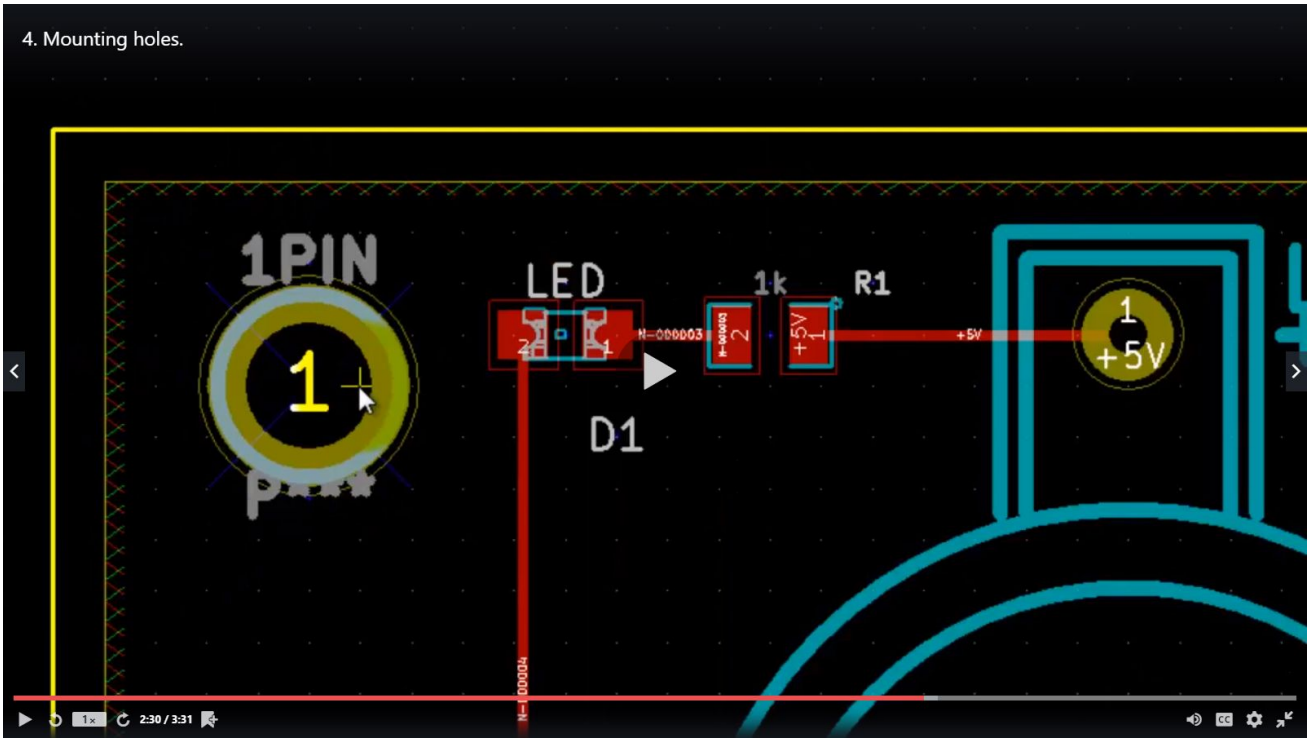
REPORT JUNE 09

Date:	**09 JUNE 2020**	**Name:**	**Rakshith B**
Course:	**Udemy**	**USN:**	**4AL16EC409**
Topic:	**KiCAD**	**Semester & Section:**	**6th SEM B**
Github Repository:	**Rakshith-B**		

FORENOON SESSION DETAILS

Image of session



Report –

What is Kicad ?

KiCad is a free software suite for electronic design automation. It facilitates the design of schematics for electronic circuits and their conversion to PCB designs. KiCad was originally developed by Jean-Pierre Charras. It features an integrated environment for schematic capture and PCB layout design.

Why Kicad ?

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Introduction to the KiCAD

If you're like me and you've decided to take the plunge from EAGLE PCB to KiCad it can be really jarring. EAGLE had many quirks and rough edges that I'm sure I cursed when I first learned it back in 2005. Since then EAGLE has become a second language to me and I've forgotten all the hard bits. So as you migrate to KiCad remember to take breaks and breathe (and say 'Key-CAD' in your head). You'll be dreaming in KiCad in no time!

This tutorial will walk you through a KiCad example project from schematic capture to PCB layout. We'll also touch on library linking, editing, and creation. We'll also export our PCB to gerbers so the board can be fabricated.

While this tutorial is aimed at beginners I am going to use terms such as 'schematic components' and 'polygon pours'. If something doesn't make sense that's ok, just take a moment to do a quick search. If you really get stuck please use the comments section on the right. We always want to improve our tutorials to make them easier.

Setting Up a Project

- ** *.pro** - Main project file to keep track of the file structure.
- ** *.cmp** - Defines which footprints go with which schematic components.
- ** *.kicad_pcb** - The PCB layout.
- ** *.sch** - The schematic.

Linking Component Libraries w/ Eeschema

From within EeSchema, click on Preferences -> Component Libraries. This will open a new window. In the image below you can see that the project file contains information about where it should look for "*Component library files*". Each project has its own connections to different file structures. We need to tell this project where to find the symbols for this schematic.

Editing a Schematic

If I get you to do nothing else, I will get you to learn the keyboard shortcuts! Yes, you can click on the equivalent buttons. However, the speed and efficiency of KiCad really shines when muscle memory kicks in so start memorizing. Here are the keyboard shortcuts in KiCad's Eeschema that we will be using frequently in this tutorial:

- **a - To add components.**
- **c - Copy a component when the cursor is over another component.**
- **w - To wire components.**
- **v - Edit component value.**
- **Esc - Escape mode or whatever command in progress and return to normal pointer mode.**
- ** ctrl+z** - Undo. Use liberally to undo any mistakes.**

- **ctrl+s - To save. Make sure to save often!**

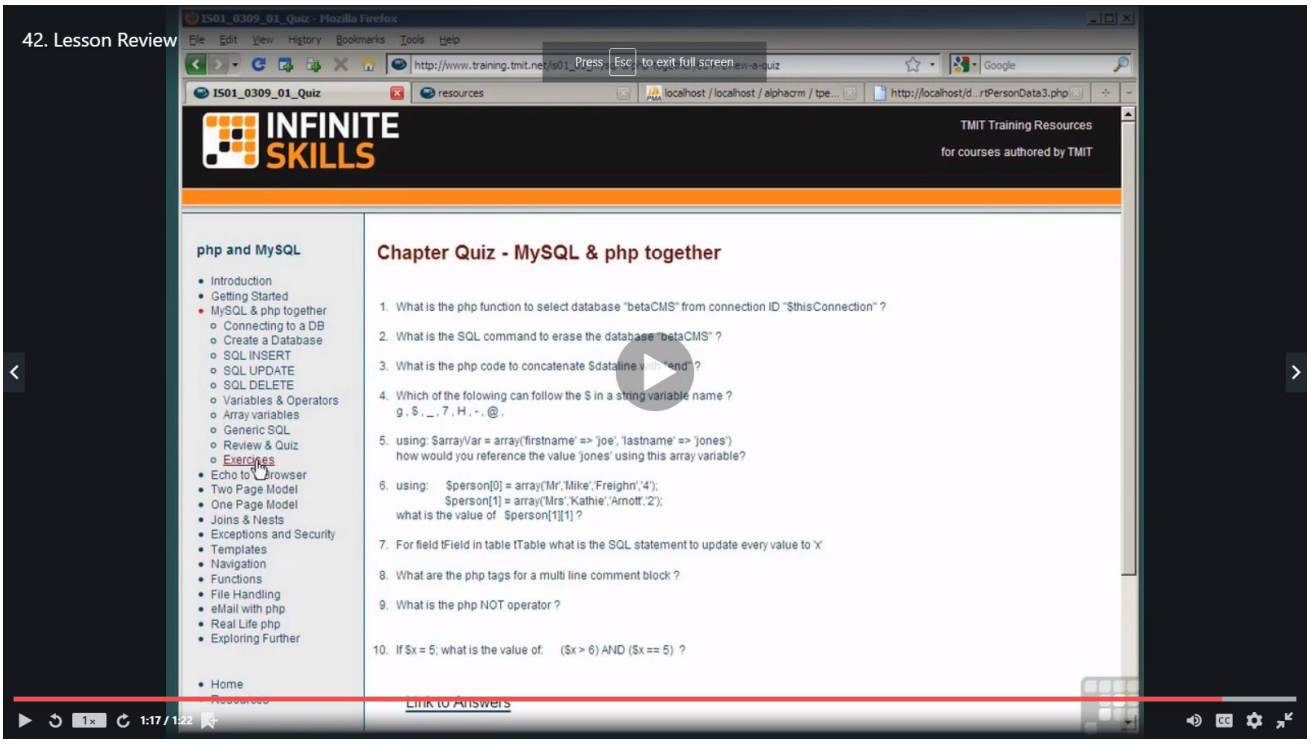
Date: 09 JUNE 2020 **Name:RAKSHITH B**

Course: PHP & MYSQL On Udemy **USN:4AL16EC409**

Topic: First Look at MySQL and PHP **Semester & Section:6 B**

AFTERNOON SESSION DETAILS

Image of session



Report –

Creating Database:

```php
<?php

function OpenCon()
{
$dbhost = "localhost";
$dbuser = "root";
$dbpass = "1234";
$db = "example";


$conn = new mysqli($dbhost, $dbuser, $dbpass,$db) or die("Connect failed: %s\n". $conn -> error);


return $conn;
}

function CloseCon($conn)
{
$conn -> close();
}

?>
```

Create new php file to check your database connection

```php
<?php
include 'db_connection.php';

$conn = OpenCon();

echo "Connected Successfully";

CloseCon($conn);

?>
```

MySQLi Procedural Query

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

// Create connection
$conn = mysqli_connect($servername, $username, $password,$db);

// Check connection
if (!$conn) {
  die("Connection failed: " . mysqli_connect_error());
}
echo "Connected successfully";
?>
```

Connect MySQL Database with PHP Using PDO

```
<?php

$servername = "localhost";

$username = "username";

$password = "password";

$db = "dbname";



try {

  $conn = new PDO("mysql:host=$servername;dbname=myDB", $username, $password, $db);
```

```
16.
17.  // set the PDO error mode to exception
18.
19.   $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
20.
21.   echo "Connected successfully";
22.
23.   }
24.
25. catch(PDOException $e)
26.
27.   {
28.
29.   echo "Connection failed: " . $e->getMessage();
30.
31.   }
32.
33. ?>
```

Check Connection

```
1.  <?php
2.
3.  include 'db_connection.php';
4.
5.
6.
7.  echo "Connected Successfully";
8.
9.  mysqli_close($conn);
10.
11. ?>
```