**DAILY ASSESSMENT FORMAT**

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| **Date:** | **6/10/20** | **Name:** | **Sathya br** |
| **Course:** | **PCB designusing Kicad** | **USN:** | **4al16ec065** |
| **Topic:** | **Mounting holes, create a library,create a PCB footprint component** | **Semester & Section:** | **6th semister**  **B section** |
| **Github Repository:** | **sathyabr** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session** |
| **Report – Report can be typed or hand written for up to two pages.**  **Mounting holes**:  Mounting holes are on every PCB design, but there is very little documentation about this subject matter. A Google or Wikipedia search on “Mounting Holes” renders no solutions to the PCB designer. Another issue that interferes with standardization is Imperial Unit ASNI hardware and ISO Metric hardware. So we’re going to have to explain both unit systems for clarity. But first let’s start with the basic fundamentals that both unit systems have in common.  The supported mounting hole usually gets tied to the GND plane without a Thermal Relief (a direct connection is best) and the supported hole w/vias gets both the main hole and the vias tied to the GND plane. Due to the fact that mounting hardware never gets soldered to the PCB, there is no reason for a Thermal Relief pattern and you connect all holes (including vias) directly to the plane. The unsupported (non-plated) hole has no connection to a GND plane layer and they require an outer layer keep-out defined that compensates for the hardware tolerances. See figure 2 for an illustration of the slop tolerance of a flat washer and the necessary copper keep-out sizing. There are two primary reasons for adding vias to the supported mounting hole. The first was to insure that if the screw threads stripped the copper plating from the main hole that the vias would still provide adequate ground connections. The second reason was for additional support to prevent the PCB from crushing when too much torque was used to tighten the nut. The average via hole size for mounting holes is 0.5 mm. See Figure 3 for a supported mounting hole with vias.  **Create a library:**  The library name should be unique within the chosen library table. It should also communicate what footpirnts to expect within it to your target audience. Do not include special chars inside your library name as it might create problems in some platforms. This means the most shareable name will only contain letters, numbers, underline and minus. (This is only a suggestion. Add additional chars at your own risk.After creating the library you will need to add the library to the global or project library table. Adding it to the global table will make this lib visible to all your projects. The project (also known as local) library table only adds it to the current project.  **Create a PCB footprint:** Altium Designer hosts a huge array of ready-made PCB Components both in servers as well as in several integrated and discrete libraries available through AltiumLive. However, even with this rich set of resources, it is likely that at some point in your career you will need to create a custom PCB Component. PCB Component Footprints are created in the PCB Library editor using the same set of primitive objects available in the PCB editor. In addition to footprints, company logos, fabrication definitions, and other objects required during board design can also be saved as PCB Components.The real-world component that gets mounted on the board is represented as a schematic symbol during design capture, and as a PCB footprint for board design. |

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| **Date:** | **6/10/20** | **Name:** | **Sathya br** | |
| **Course:** | **MySql** | **USN:** | **4al16ec065** | |
| **Topic:** | **Hiding a sensitive data,php ecgo and quotes,formatting using sprint,intro to user defined variables** | **Semester & Section:** | **6th semister**  **B section** | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| **Report – Report can be typed or hand written for up to two pages.**  **Hiding a sensitive data:**  When thinking about security within a MySQL installation, you should consider a wide range of possible procedures / best practices and how they affect the security of your MySQL server and related applications. MySQL provides many tools / features / plugins in order to protect your data including some advanced features like Transparent Data Encryption aka TDE, Audit, Data Masking & De-Identification, Firewall, Password Management, Password Validation Plugin, etc…  In order to mitigate the effects of **data breaches**, and therefore the associated **risks for your organization**’s brand and reputation, popular regulations or standards including **GDPR, PCI DSS**, **HIPAA**,… recommand (among others things) **data masking** and **de-identification**. PHP double quotes vs single quotes Strings in PHP can be specified in four different ways: single quoted, double quoted, heredoc syntax and (since PHP 5.3.0) nowdoc syntax, the first two of them being by far the most frequently used.  It is important to know the difference between using single quotes and double quotes. In this post we will see the difference between them and which should be used when.  Single quoted strings are the easiest way to specify string. This method in used when we want to the string to be exactly as it is written. When string is specified in single quotes PHP will not evaluate it or interpret escape characters except single quote with backslash (‘) and backslash(\) which has to be escaped. PHP sprintf() FunctionDefinition and Usage The sprintf() function writes a formatted string to a variable.  The arg1, arg2, ++ parameters will be inserted at percent (%) signs in the main string. This function works "step-by-step". At the first % sign, arg1 is inserted, at the second % sign, arg2 is inserted, etc.  If there are more % signs than arguments, you must use placeholders. A placeholder is inserted after the % sign, and consists of the argument- number and "\$". See example two.  Related functions: printf(), vprintf(), vsprintf(), fprintf() and vfprintf() | | | |