

Morning session:

Today richie told me to implement the dictionary,list,tuple,index,append,remove and dataframes in the python.I have created a folder and named workout and implemented those concepts.After implementing I clearly understood about those data structures.

Then from the excel worksheet he told me to work on the empty cells to be filled with NULL.

```
df["Item"]=df["Item"].fillna("null")
```

And in the number column the cell which contains ERROR should be replaced with 0.0 using the replace command.

```
df["Total Spent"]=df["Total Spent"].replace("ERROR",0.0)
df.drop('Location', axis=1, inplace=True)
df.drop('Quantity',axis=1,inplace=True)
```

After deleting a particular column the dataframe should be saved using the to.file name command

```
df.to_csv("C:\\Users\\R.Ragini\\Downloads\\sales.csv", index=False)
```

practising on these commands which makes me to understand the concept very well.

Afternoon session:

In the afternoon session koushik sir explained about languages.

Languages:

computers are DUMP.Human created a language in which machine can understands are 0's and 1's called binary codes.

These binary codes are called as **low level languages**.

After the low level languages,in order to give set of instructions in which the machine can understand called **machine language, or assemble language**. Say for an example,in washing machine it displays some instructions like on off time.These are all the set of instructions that is inbuild.

Then the **high level languages are developed** like c,c++,java,python.it is used for humans to interact with the machines.

Rules:

For English language we follow grammer,puntuations etc.so there is set of rules we need to follow while writing English language.they are

A space for each word.

Commas for continuation.

A full stop at the end of the word.

Every starting letter of the word should be in capital letter.

The sentence should makes a meaning in it.

Likewise,the programming language that follows some steps like:

Syntax->rules to be followed.

Semantics->meaning behind the rules.

So for every programming language we need to follow syntax and semantics.

How computer understands the language:

Programming language->compiler(which is a translator)->MLL(machine level language);

so the humans we give the input as programming language and the compiler which converts the source into machine code using the translator and it is converted into machine language and it displays the output.

English language:

Every English language which have

1. Alphabets
2. Word
3. Line
4. Sentence
5. Paragraph

Similarly the computer language which have

1. Symbols->alphabets,special characters;
2. Tokens->collection of one or more symbols;(example:car,hello)
3. Expression->collection of tokens but the validity of expression depends on syntax and semantics;only we can able to understand grammer then only we can able to write expression.

Then koushik sir gave us the task to write secret coding.like we need to assign some special characters,symbols,alphabets or numbers to each letter and then we have to write a paragraph by changing those letters into that assigned symbols.

Example:A->1

B->2

C->@

Upto z->#

By converting the letters into that special characters which is called secret coding.

Then after this session we went to our mentors.Riche explained about **data cleaning and data preprocessing** with some examples.In order to cleaning and preprocessing the data first thing we should do analysis of that document so that we can avoid mistakes in the future.

For example if we want to add 0 in the column which is empty.then we write the code but the worksheet which may contains lot of columns.In that there will be a string column which contains alphabets but we wrote the code wherever the column is empty should print as 0.here the text column is filled with 0.so it will become as unstructured data.so the data analysis that is data cleaning and preprocessing is more important.

Then he told me to read html and css basic concepts and what are all the commands are used and told me to work practically by doing simple codings to create a webpage in both html and css.