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| **Date:** | **21-07-2020** | **Name:** | **Rachana C Hulikatti** |
| **Course:** | **Python** | **USN:** | **4AL17EC108** |
| **Topic:** | **How to develop Pythonic coding rather than Python coding** | **Semester & Section:** | **6th B** |
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**DAILY ASSESSMENT FORMAT**

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| **FORENOON SESSION DETAILS(9.00am to 1.00pm)** |
| C:\Users\Hp\Desktop\report\21pyt1111.PNG  **C:\Users\Hp\Desktop\report\21pyt22222.PNG**  **C:\Users\Hp\Desktop\report\21pyt3333.PNG**  C:\Users\Hp\Desktop\report\21pyt4444.PNG  **C:\Users\Hp\Desktop\report\21pyt5555.PNG**  **C:\Users\Hp\Desktop\report\21pyt6666.PNG**  **C:\Users\Hp\Desktop\report\21pyt77777.PNG**  **C:\Users\Hp\Desktop\report\21pyt88888.PNG**  Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace.  What is Python used for?  It's often **used as** a “scripting language” for web applications. This means that it can automate specific series of tasks, making it more efficient. Consequently, **Python** (and languages like it) is often **used** in software applications, pages within a web browser, the shells of operating systems and some games.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Date:** | | **21-07-2020** | **Name:** | **Rachana C Hulikatti** | | **Course:** | | **Coursera** | **USN:** | **4AL17EC108** | | **Topic:** | | **Basic statistics** | **Semester & Section:** | **6th B** | |  |  | |   **C:\Users\Hp\Desktop\report\21bas1111.PNG**  **C:\Users\Hp\Desktop\report\21bas2222.PNGC:\Users\Hp\Desktop\report\21bas33333.PNG**  **C:\Users\Hp\Desktop\report\21bas4444.PNG**  **C:\Users\Hp\Desktop\report\21bas5555.PNG**  There are few well know **statistics** are the average (or “mean”) value, and the “standard deviation” etc. Standard deviation is the variability within a data set around the mean value. The “variance” is the square of the standard deviation. The linear trend is another example of a data “**statistic**”.   Types of statistics   * Mathematical statistics. * Data collection. * Types of data. * Descriptive statistics. * Inferential statistics. * Exploratory data analysis. * Misinterpretation: correlation. * Applied statistics, theoretical statistics and mathematical statistics.   **Statistical** methods involved in carrying out a study include planning, designing, collecting **data**, analysing, drawing meaningful interpretation and reporting of the research findings. The **statistical analysis** gives meaning to the meaningless numbers, thereby breathing life into a lifeless **data**.  **Statistics** is the discipline that concerns the collection, organization, analysis, interpretation and presentation of data. In applying statistics to a scientific, industrial, or social problem, it is conventional to begin with a [statistical population](https://en.wikipedia.org/wiki/Statistical_population) or a [statistical model](https://en.wikipedia.org/wiki/Statistical_model) to be studied. Populations can be diverse groups of people or objects such as "all people living in a country" or "every atom composing a crystal". Statistics deals with every aspect of data, including the planning of data collection in terms of the design of [surveys](https://en.wikipedia.org/wiki/Statistical_survey) and [experiments](https://en.wikipedia.org/wiki/Experimental_design). See [glossary of probability and statistics](https://en.wikipedia.org/wiki/Glossary_of_probability_and_statistics).  When [census](https://en.wikipedia.org/wiki/Census) data cannot be collected, [statisticians](https://en.wikipedia.org/wiki/Statistician) collect data by developing specific experiment designs and survey [samples](https://en.wikipedia.org/wiki/Sample_(statistics)). Representative sampling assures that inferences and conclusions can reasonably extend from the sample to the population as a whole. An [experimental study](https://en.wikipedia.org/wiki/Experimental_study) involves taking measurements of the system under study, manipulating the system, and then taking additional measurements using the same procedure to determine if the manipulation has modified the values of the measurements. In contrast, an [observational study](https://en.wikipedia.org/wiki/Observational_study) does not involve experimental manipulation.  Two main statistical methods are used in [data analysis](https://en.wikipedia.org/wiki/Data_analysis): [descriptive statistics](https://en.wikipedia.org/wiki/Descriptive_statistics), which summarize data from a sample using [indexes](https://en.wikipedia.org/wiki/Index_(statistics)) such as the [mean](https://en.wikipedia.org/wiki/Mean) or [standard deviation](https://en.wikipedia.org/wiki/Standard_deviation), and [inferential statistics](https://en.wikipedia.org/wiki/Statistical_inference), which draw conclusions from data that are subject to random variation (e.g., observational errors, sampling variation). Descriptive statistics are most often concerned with two sets of properties of a *distribution* (sample or population): [*central tendency*](https://en.wikipedia.org/wiki/Central_tendency) (or *location*) seeks to characterize the distribution's central or typical value, while [*dispersion*](https://en.wikipedia.org/wiki/Statistical_dispersion) (or *variability*) characterizes the extent to which members of the distribution depart from its center and each other. Inferences on [mathematical statistics](https://en.wikipedia.org/wiki/Mathematical_statistics) are made under the framework of [probability theory](https://en.wikipedia.org/wiki/Probability_theory), which deals with the analysis of random phenomena.  A standard statistical procedure involves the collection of data leading to [test of the relationship](https://en.wikipedia.org/wiki/Statistical_hypothesis_testing) between two statistical data sets, or a data set and synthetic data drawn from an idealized model. A hypothesis is proposed for the statistical relationship between the two data sets, and this is compared as an [alternative](https://en.wikipedia.org/wiki/Alternative_hypothesis) to an idealized [null hypothesis](https://en.wikipedia.org/wiki/Null_hypothesis) of no relationship between two data sets. Rejecting or disproving the null hypothesis is done using statistical tests that quantify the sense in which the null can be proven false, given the data that are used in the test. Working from a null hypothesis, two basic forms of error are recognized: [Type I errors](https://en.wikipedia.org/wiki/Type_I_error) (null hypothesis is falsely rejected giving a "false positive") and [Type II errors](https://en.wikipedia.org/wiki/Type_II_error) (null hypothesis fails to be rejected and an actual relationship between populations is missed giving a "false negative").[[6]](https://en.wikipedia.org/wiki/Statistics#cite_note-6) Multiple problems have come to be associated with this framework: ranging from obtaining a sufficient sample size to specifying an adequate null hypothesis.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]  Measurement processes that generate statistical data are also subject to error. Many of these errors are classified as random (noise) or systematic ([bias](https://en.wikipedia.org/wiki/Bias_(statistics))), but other types of errors (e.g., blunder, such as when an analyst reports incorrect units) can also occur. The presence of [missing data](https://en.wikipedia.org/wiki/Missing_data) or [censoring](https://en.wikipedia.org/wiki/Censoring_(statistics)) may result in biased estimates and specific techniques have been developed to address these problems. |

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