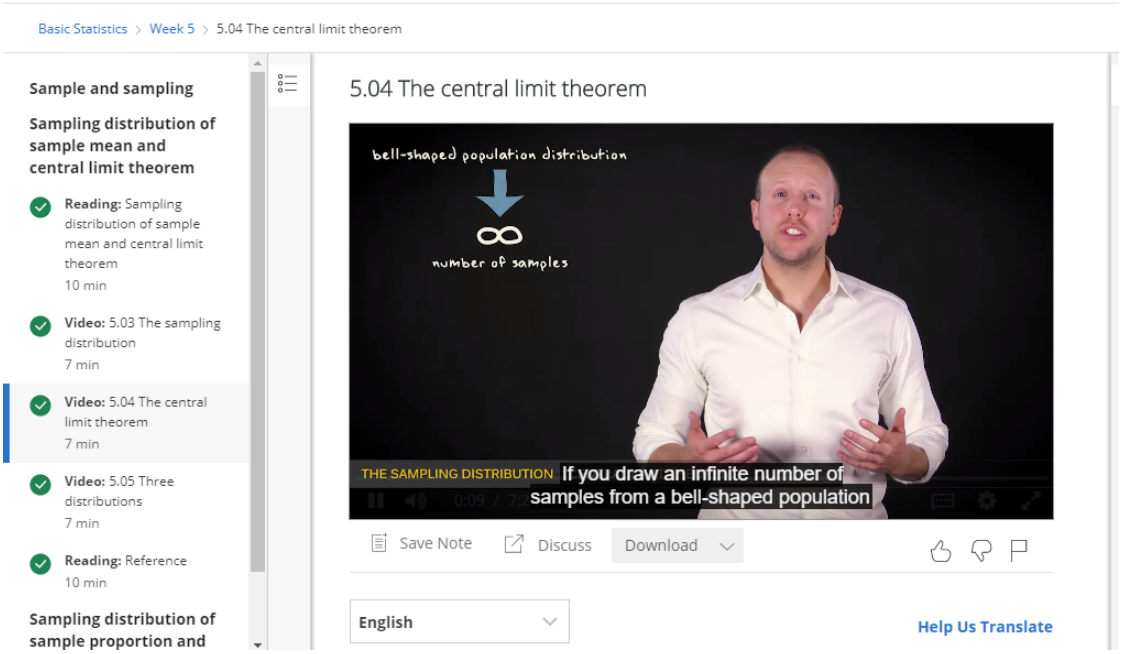
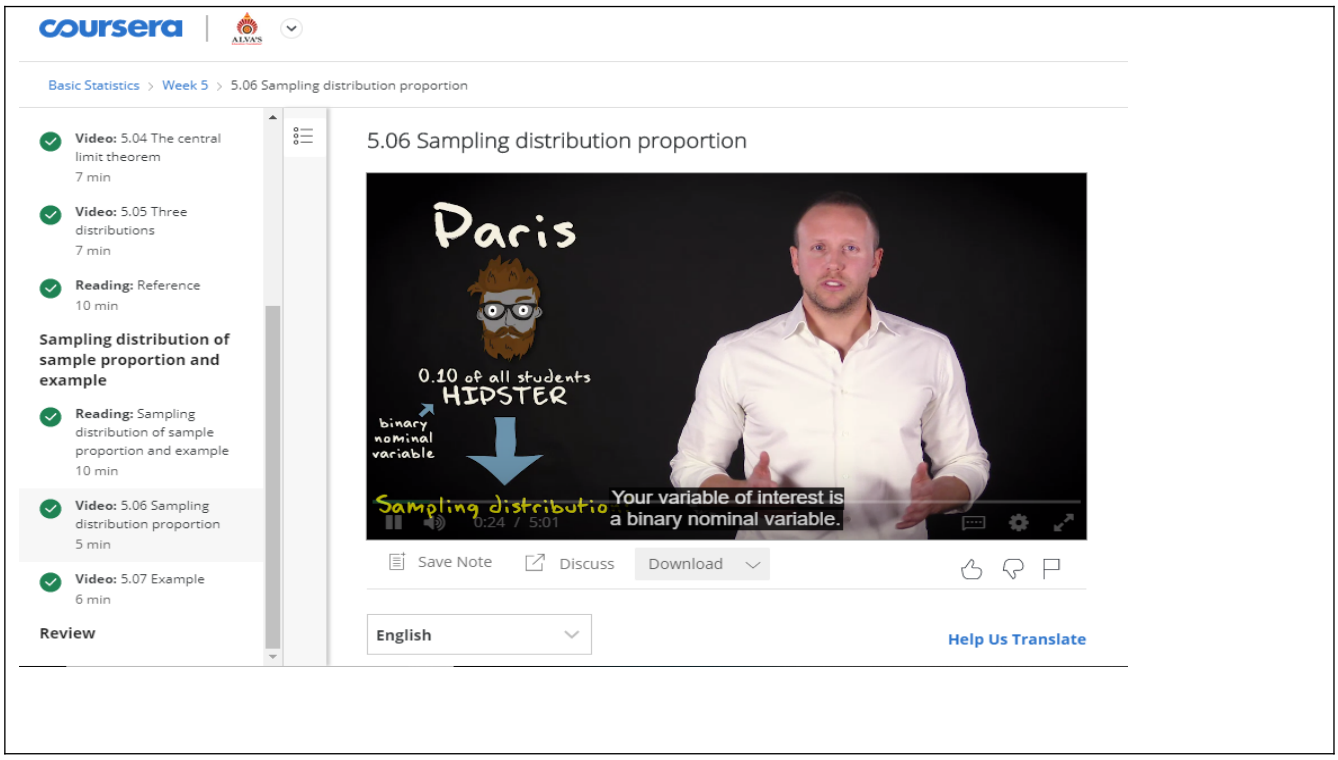
DAILY ASSESSMENT

Date:	29-07-2020	Name:	POOJA K S
Course:	Coursera	USN:	4AL17EC070
Topic:	Basic Statics	Semester & Section:	6TH SEM & 'B' Section
Github Repository:	pooja-shivanna		

SESSION DETAILS





Sample and Population

200 students
↓
COMPUTATIONS
univariat analys — bivariat analys
mode, means, standard deviation
Pearson's R, regression analys
↓
numerical summaries
statistics

sample ——————→ Population
↓
Statistics — Inferential statistics → Parameter
↓ ↓
Roman letters — Greek letter
$\bar{x}$ = mean — μ = mean
s = SD in sample — σ = SD in population

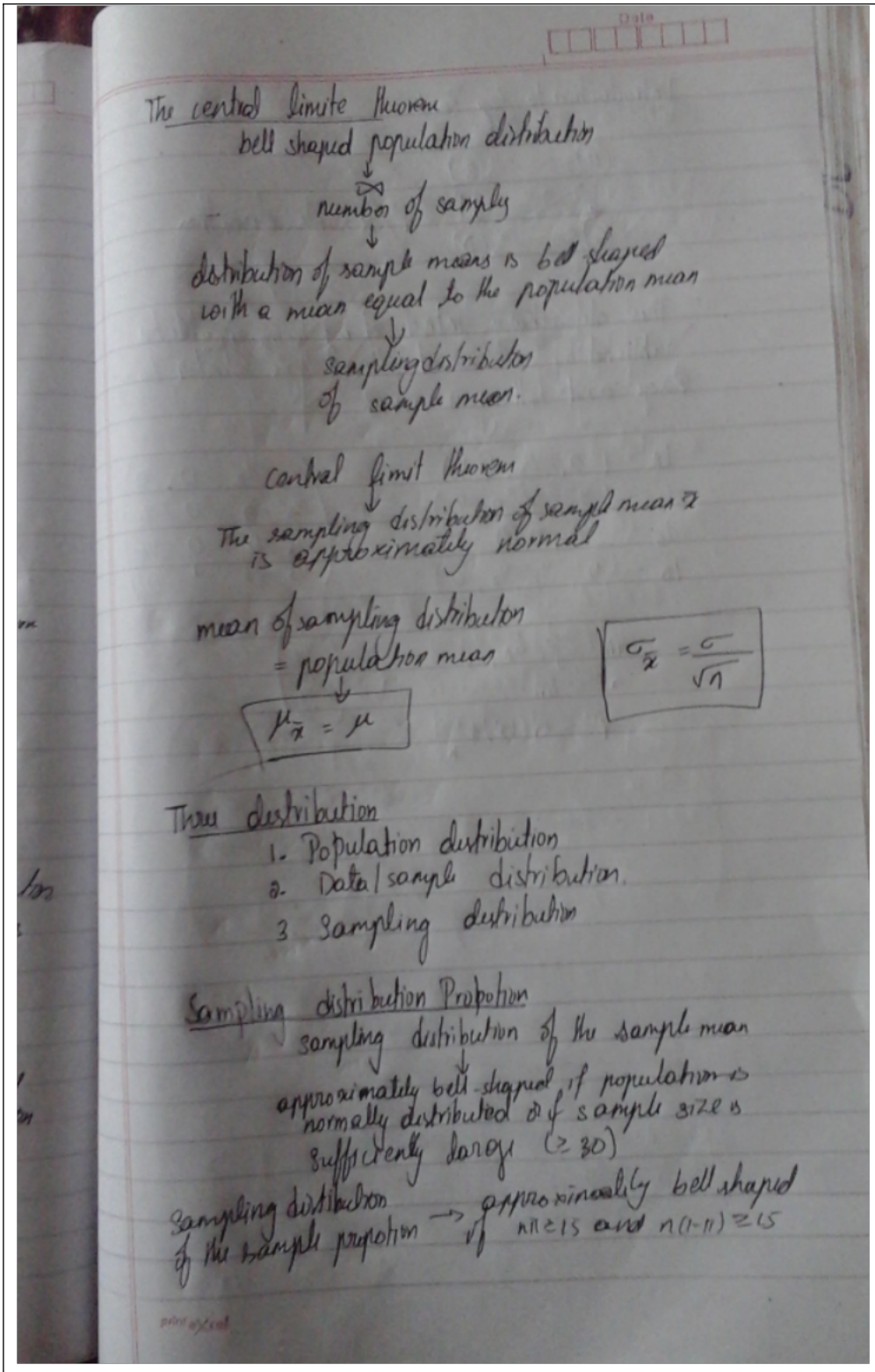
Sampling

Inferential statistics refers to method used to draw conclusion about a population, based on data coming from a sample

A sample is nothing more than a subset of a population yet for methods of inferential statics, not sample is appropriate

The sampling distribution

Sample distribution is the link that helps researchers to draw conclusions about a population on the basis of only one sample



The central limite theorem

bell shaped population distribution

↓

number of samples

↓

distribution of sample means is bell shaped with a mean equal to the population mean

↓

sampling distribution of sample mean.

Central limit theorem

↓

The sampling distribution of sample mean $\bar{x}$ is approximately normal

mean of sampling distribution = population mean

↓

$\mu_{\bar{x}} = \mu$

$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$

Three distribution

1. Population distribution
2. Data/sample distribution.
3. Sampling distribution

Sampling distribution Proportion

sampling distribution of the sample mean

↓

approximately bell-shaped if population is normally distributed & if sample size is sufficiently large (≥ 30)

Sampling distribution of the sample proportion → approximately bell shaped if $np \geq 15$ and $n(1-p) \geq 15$