Sri Lanka Institute of Information

Technology



Lab Submission

07

**IT24103021**

**Rajapaksha R.P.V**

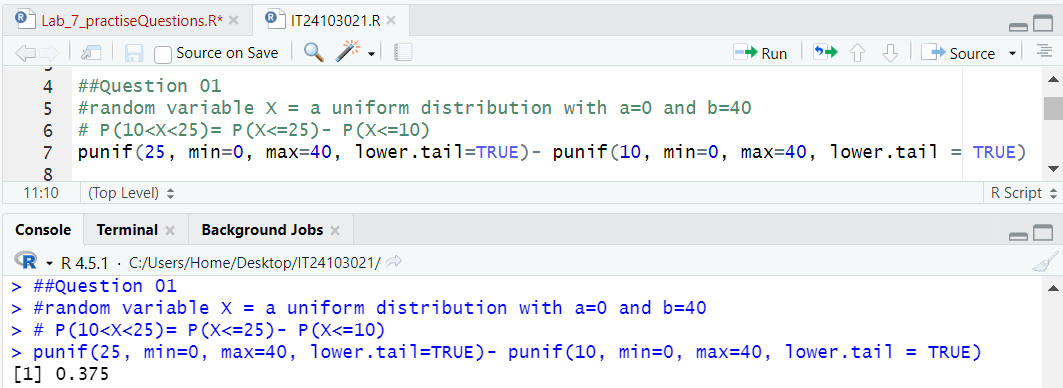
**Probability and Statistics - IT2120**

B.Sc. (Hons) in Information Technology

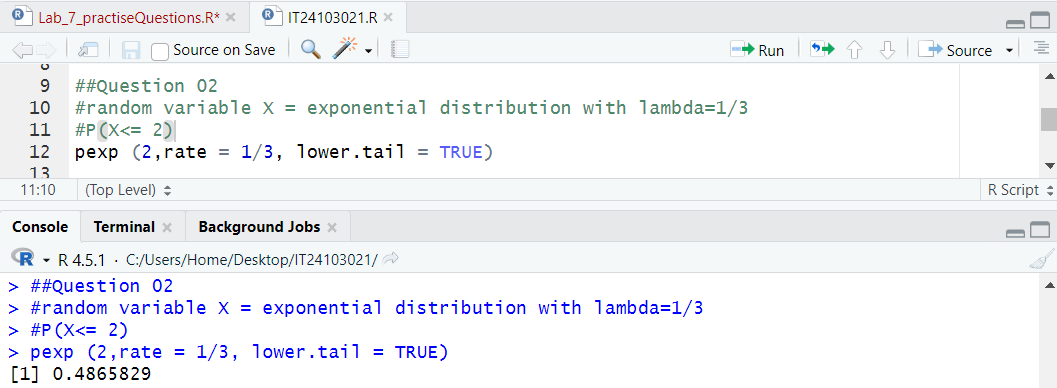
**Exercise**

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1. A train arrives at a station uniformly between 8:00 a.m. and 8:40 a.m. Let therandom variable X represent the number of minutes the train arrives after 8:00a.m. What is the probability that the train arrives between 8:10 a.m. and 8:25a.m.?

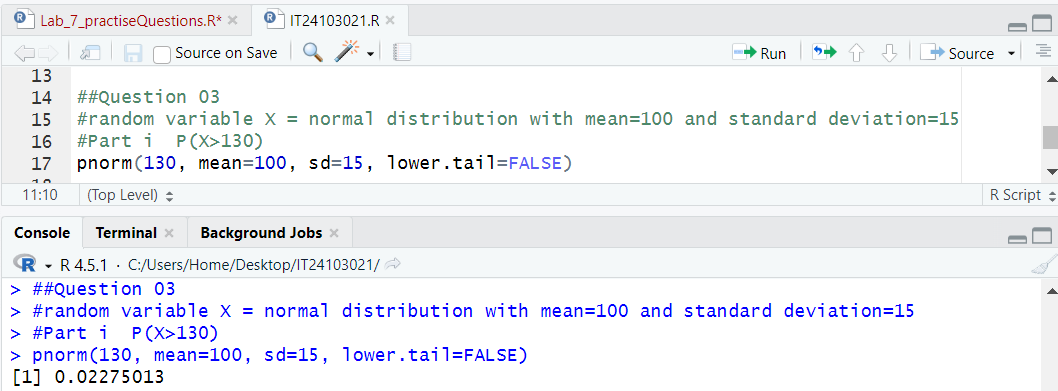
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2. The time (in hours) to complete a software update is exponentially distributed with rate λ=1/3 . Find the probability that an update will take at most 2 hours.



3. Suppose IQ scores are normally distributed with a mean of 100 and a standard deviation of 15.

i. What is the probability that a randomly selected person has an IQ above 130?



ii. What IQ score represents the 95th percentile?

