CMPE 100: Introduction to Computing

Worksheet05

1. (30 points) Write a function named categoriseBMI that takes BMI value (Body Mass Index) as parameter. The function categorise the BMI with following criterias:

   Contract:

   categoriseBMI: number (BMI index) $\rightarrow$ String

   $$categoriseBMI(BMI) = \begin{cases} Underweight & \text{if } BMI <= 18.5 \\ Normalweight & \text{if } 18.5 < BMI <= 25 \\ Overweight & \text{if } 25 < BMI <= 30 \\ Obesity & \text{if } BMI > 30 \end{cases}$$

2. (30 points) Write a function named connectionBill that takes the capacity used that month. The function calculates monthly internet connection prices.

   Contract:

   connectionBill: number (capacity) $\rightarrow$ number (connection price)

   ;Assume that your local telecommunication company takes:

   ;29 YTL up to 3GB capacity usage for a limited connection type.

   ;For this type of connection every GB after passing 3GB is priced as 12 YTL.

   ;For example,

   ;if you use 2.6GB, you pay 29 YTL,

   ;if you use 1.2GB, you pay 29 YTL.

   ;if you use 3.2 GB then you should pay 29 + (0.2*12) = 31.4 YTL.

3. (40 points) Animate one moving image starts at (0,0) point and goes diagonal. When it access at the middle of the scene, then return back and landing at origin again.

   Note: Ensure that your programs are fully documented, using comments.