

Istanbul Bilgi University

Department of Computer Engineering

Fall 2022-2023

CMPE 100: Introduction to Computing

Worksheet05

1. (30 points) Design 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

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

2. (30 points) Design 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 TL up to 3GB capacity usage for a limited connection type.

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

;For example,

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

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

;if you use 3.2 GB then you should pay $29 + (0.2 \cdot 12) = 31.4$ TL.

3. (40 points) Design a function named **goDiagonalback** that 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.