

CMSC21 Lab Exercise 6 - Design Recipe and Testing

Following the design recipe, create the following functions. Do not remove the stub and template after completing the function; just leave it commented out.

Testing: Create a complete set of test cases for each category of inputs; include all boundary cases. Show that there is 100% code coverage.

Design recipe steps:

1. Signature, purpose and stub
2. Define examples
3. Template and inventory (create constants)
4. Code the function body
5. Test and debug until correct

1. To catch videos of lions at the watering hole, you set up an automatic wildlife camera to switch on if the light level is less than 0.01 lux (a measurement of brightness) or if the temperature is above freezing (in Celsius), but not if both conditions are true. Create a function that determines whether the camera should be switched on, given the light level and temperature.

2. Create a function that accepts 3 integers and returns the value of the largest int.

3. This table determines if someone is at risk for heart disease, given his age and body mass index. Create a function that returns the risk level for a person: 1 – Low, 2 – Medium, 3 – High.

		Age	
		< 45	≥ 45
BMI	< 22.0	Low	Medium
	≥ 22.0	Medium	High