

CIS 101 — Quiz 4 solution

Name:

Answer the following question using the MATLAB programming language. Try to be as exact as possible. Your answers should be such that if typed into MATLAB they will produce the correct result. Exactly correct answers will receive full credit. Note that there may be more than one way to answer the question and so any correct answer will be accepted.

Problem 1. Write a function called `product_range` that takes two numbers, computes their product, and outputs

- *between 0 and 20* if the product is at least 0 and at most 20,
- *between 20 and 40* if the product is at least 20 and at most 40, and
- *at least 40* if the product is at least 40.

The syntax for the `if else end` block is

```
if <conditional expression>
    <matlab commands>
elseif <conditional expression>
    <matlab commands>
else
    <matlab commands>
end
```

The syntax for a function definition is

```
function <return_value> = <function_name>(<arg1>, <arg2>, ..., <argn>).
```

```
function z = produce_range(x, y)
a = x*y
if 0 < a & a <= 20
    disp('between 0 and 20')
elseif 20 < a & a <= 40
    disp('between 20 and 40')
elseif 40 < a
    disp('at least 40')
end
```

Problem 2. Write a function called `min` that takes two numbers and returns the smaller of the two.

```
function z = min(x, y)
if x < y
    z = x
else
    z = y
end
```