COMP308 Emerging Technologies

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Lab Exercise 2:

const product = (x,y) => x \* y;  
a) Is this function a pure function? Explain your answer.  
Ans: Yes, the function does meet the criteria for a pure function. The function has at least 1 argument that does not change the supplied arguments and returns the result.

b) Test the function by calling it with different arguments and verify the output.

Ans: Tested with various arguments as shown below.

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const funct1 = display => {  
 display("Passing a function as argument");  
};

a. What type of argument does this function take?  
Ans: The function takes a function type argument or In other words, it takes a function as a parameter.

b. Write the code to test this function. You can test the function by passing a  
function as an argument to `funct1` and observe the result. The function you are  
passing should be a function that can display an output (its implementation  
contains a console.log call)  
Ans: Tested the code with supplied function argument as shown below.  
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c. Is funct1 a pure function? Justify your answer.  
Ans: funct1 is not a pure function. Although it has at least 1 argument and is immutable, it does not return anything, which makes it an impure function.

const showMessage = function(show) {  
 return function(message) {  
 show(message.toUpperCase() + "!!!");  
 };  
};  
a) Write the code to test this function. Test showMessage by defining a function to pass  
as an argument, then invoke the returned function with a message.  
Ans: Tested the showMessage function with following arguments shown below.  
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8. Array.map() example

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9. Array.reduce() example

A screenshot of a computer program

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Exercise 10

A screenshot of a computer screen

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