HTTP 5101 Assignment 1

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Your task is to create Application Programming Interfaces (APIs) which implement the described functionality.

Question 1

GET http://localhost/api/AddTen/{id}

Returns 10 more than the integer input {id}.

Request	Response
GET .../AddTen/21	31
GET .../AddTen/0	10
GET .../AddTen/-9	1

Question 2

GET http://localhost/api/Square/{id}

Returns the square of the integer input {id}.

Request	Response
GET ../Square/2	4
GET ../Square/-2	4
GET ../Square/10	100

Question 3

POST http://localhost/api/Greeting

Returns the string “Hello World!”

Request	POST DATA	Response
POST ../Greeting		“Hello World!”

Question 4

GET http://localhost/api/Greeting/{id}

Returns the string “Greetings to {id} people!” where id is an integer value.

Request	Response
GET .../Greeting/3	Greetings to 3 people!
GET .../Greeting/6	Greetings to 6 people!
GET .../Greeting/0	Greetings to 0 people!

Bonus Question

Note: Bonus questions are far more challenging than regular questions! Trying the question will earn you INITIATIVE marks as per the rubric. See how close you can get!

GET http://localhost/api/HostingCost/{id}

You are charging your client $5.50 / FN (fortnight = 14 days) for web hosting and maintenance. The input {id} represents the number of days which has elapsed since the beginning of the hosting. Also remember to charge 13% HST. Output 3 strings which describe the total hosting cost.

Request	Response
GET .../HostingCost/0	“0 fortnights at $5.50/FN = $5.50 CAD” “HST 13% = $0.72 CAD” “Total = $6.22 CAD”
GET .../HostingCost/14	“1 fortnights at $5.50/FN = $11.00 CAD” “HST 13% = $1.43 CAD” “Total = $12.43 CAD”
GET .../HostingCost/15	“1 fortnights at $5.50/FN = $11.00 CAD” “HST 13% = $1.43 CAD” “Total = $12.43 CAD”
GET .../HostingCost/21	“1 fortnights at $5.50/FN = $11.00 CAD” “HST 13% = $1.43 CAD” “Total = $12.43 CAD”
GET .../HostingCost/28	“2 fortnights at $5.50/FN = $16.50 CAD” “HST 13% = $2.14 CAD” “Total = $18.64 CAD”

5101 Assignment Rubric

	Level 1 (0-25%)	Level 2 (25-50%)	Level 3 (50-75%)	Level 4 (75-100%)
Git	Assignment is not successfully submitted through git URL		Git repository created successfully. Files are in the repository. Repository is public.	
Quantitative	Multiple (4+) quantitative issues. Eg. Missing semicolons, other C# syntax errors. Indentation issues. Variables not bound to the correct data types.	Several (2+) quantitative issues. Eg. Missing semicolons, other C# syntax errors. Indentation issues. Variables not bound to the correct data types.	One quantitative issue. Eg. Missing semicolons, other C# syntax errors. Indentation issues. Variables not bound to the correct data types.	Zero quantitative issues.Code is compact, readable, and straightforward.
Qualitative	Convention is neither accurate or consistent. Eg. using inconsistent C# variable names. Improper indentation on if statements, no comments on code	Convention is exclusively either accurate or consistent. Eg. using inconsistent C# variable names. Improper indentation on if statements, few comments on code	Convention is accurate and consistent with a few exceptions. Eg. using inconsistent C# variable names. Improper indentation on if statements, satisfactory comments on code	Convention is accurate and consistent with no exceptions, detailed code comments.
Semantic	There is no attempt to create an algorithm which matches the context.	An algorithm is attempted to match the context however the logic is not adequate.	An algorithm is created to match the context. The logic is sound, but the code could be factored.	The algorithm and the context are well-aligned, logic is well-considered and refined. Code is factored well.
Initiative	The content of the work meets the bare minimum requirements.	The content of the work meets the requirements, and there is an attempt to try something new. Not working code is commented out.	The content of the work exceeds the expectations of the assignment. Not working code is commented out.	The content of the work exceeds the expectations of the assignment, and the code runs adequately.