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Assignment-1
Back-End Web Development 1 - HTTP-5125-RNA

Question1:

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q1/welcome"
Welcome to 5125!
```

TESTING:

1. Extra parameters

```
C:\Web Dev\Back End Development>curl -X GET "https://localhost:7024/api/q1/welcome?extra=param"
Welcome to 5125!
```

Question2:

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=dhruv"
Hi dhruv!
```

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=Ren%C3%A9e"
Hi Renée!
```

TESTING

1. Name with space

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=John%20Doe"
Hi John Doe!
```

2. Name with special characters

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=John%40Doe%21"
Hi John@Doe!!
```

3. Name with numbers and symbols

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=John123%24Doe"
Hi John123$Doe!
```

4. Name with a plus sign:

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=John%2BDoe"
Hi John+Doe!
```

5. Name with a comma

```
C:\Users\Dhruv>curl -X "GET" "https://localhost:7024/api/q2/greeting?name=John%2CDoe"
Hi John,Doe!
```

Question3:

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q3/cube/4"
64
```

TESTING:

1. Negative number

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q3/cube/-4"
-64
```

2. Decimal number

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q3/cube/0.5"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"base_":["The value '0.5' is not valid."]}, "traceId":"00-4898b29c28fb58f5b6dec01f7d26e7f6-25759bdd67b38a50-00"}
```

3. Missing base

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q3/cube"
```

4. Non-numeric

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q3/cube/a"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"base_":["The value 'a' is not valid."]}, "traceId":"00-c81f6cb3f2afe1b15c364be2e71d65a6-75d35482de551e12-00"}
```

QUESTION4:

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q4/knockknock"
Who's there?
```

TESTING:

1. Extra parameters

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q4/knockknock?extraparam=2"
Who's there?
```

QUESTION5:

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "5"
Shh.. the secret is 5
```

TESTING:

1. Decimal number as body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "5.5"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["The JSON value could not be converted to System.Int32. Path: $ | LineNumber: 0 | BytePositionInLine: 3."]}, "traceId":"00-b36eabaf2b925cd67e27b40d2e82f7bb-b671c92e45419ecf-00"}
```

2. Characters as body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "a"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["'a' is an invalid start of a value. Path: $ | LineNumber: 0 | BytePositionInLine: 0."]}, "traceId":"00-e7c7ef6c4aee14a512f89c3bf6ba6e42-55959832ffe10637-00"}
```

3. Negative numbers as body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "-5"
Shh.. the secret is -5
C:\Web Dev\Back End Development>
```

4. Empty body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d ""
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["A non-empty request body is required."]}, "traceId":"00-f3a1be7aa6daf6d060c11deb6f1b1378-2656399bf4f05232-00"}
```

5. Null body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "null"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["The JSON value could not be converted to System.Int32. Path: $ | BytePositionInLine: 4."]}, "traceId":"00-30af49adf47671558c0c3dcd886f7052-4999c19ca803ac51-00"}
```

6. Boolean body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json" -d "true"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["The JSON value could not be converted to System.Int32. Path: $ | LineNumber: 0 | BytePositionInLine: 4. "]}, "traceId":"00-436330fca11a18d971622d1ad8445e84-be5226cb5aec7486-00"}
```

7. Missing body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q5/secret" -H "Content-Type: application/json"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"$":["A non-empty request body is required."]}, "traceId":"00-a5eb774104ca3f67749ecbe9213b93f-a6d83c777aee2bc-00"}
```

QUESTION6:

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q6/hexagon?side=4"
41.569219381653056
```

TESTING:

1. Decimal side length

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q6/hexagon?side=4.4"
50.29875545180021
```

2. Negative side length

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q6/hexagon?side=-4"
41.569219381653056
```

3. Non-numeric side length

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q6/hexagon?side=abc"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"side":["The value 'abc' is not valid."]}, "traceId":"00-f161cd17312bab26ae853126a2fa12fb-80311ecc159b93a9-00"}
```

4. Empty Query parameter

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q6/hexagon"
0
```

QUESTION7:

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=1"
2025-01-31
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=-1"
2025-01-29
```

TESTING:

1. Zero days

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=0"
2025-01-30
```

2. Small decimal days

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=1.1"
2025-01-31
```

3. Big decimal days

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=1.6"
2025-02-01
```

4. Non-Numeric days

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days=abc"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"days":["The value 'abc' is not valid."]}, "traceId":"00-17600415b64ae6d06dd7d2dcd13b5c-65c43dd4d10a10fb-00"}
```

5. Empty input as days

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine?days="
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"days":["The value ' ' is invalid."]},"traceId":"00-daac4b03b67880d4f9bee44d35b142d8-50ff18c422421f9c-00"}
```

6. No parameter

```
C:\Web Dev\Back End Development>curl -X "GET" "https://localhost:7024/api/q7/timemachine"
2025-01-30
```

QUESTION8

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded" -d "Small=2&Large=1"
2 Small @ $25.50 = $51.00; 1 Large @ $40.50 = $40.50; Subtotal = $91.50; Tax = $11.90 HST; Total = $103.40
```

TESTING:

1. Order with 0 Small and 0 Large plushies

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded" -d "Small=0&Large=0"
0 Small @ $25.50 = $0.00; 0 Large @ $40.50 = $0.00; Subtotal = $0.00; Tax = $0.00 HST; Total = $0.00
```

2. Order with decimal number of plushies

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded" -d "Small=1.2&Large=1.2"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"Large":["The value '1.2' is not valid."],"Small":["The value '1.2' is not valid."]},"traceId":"00-5e23f846f1dc4a80a2a3a6ed5fdbeb75-8dd116c7698a414e-00"}
C:\Web Dev\Back End Development>
```

3. Order with non numeric plushies

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded" -d "Small=abc&Large=abc"
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"Large":["The value 'abc' is not valid."],"Small":["The value 'abc' is not valid."]},"traceId":"00-f2f189d38a028035919ad4f944af4183-1384b532f91ff58e-00"}
```

4. Order with empty plushies number

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded" -d "Small=&Large="
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.,"status":400,"errors":{"Large":["The value ' ' is invalid."],"Small":["The value ' ' is invalid."]},"traceId":"00-9bdab62c3eda9bfe1e6e24821a7230f6-cc81ca50c7472e47-00"}
```

5. Order with no body data

```
C:\Web Dev\Back End Development>curl -X "POST" "https://localhost:7024/api/q8/squashfellows" -H "Content-Type: application/x-www-form-urlencoded"
0 Small @ $25.50 = $0.00; 0 Large @ $40.50 = $0.00; Subtotal = $0.00; Tax = $0.00 HST; Total = $0.00
```