

L5b

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Due Sep 26, 2018 by 11:59pm **Points** 10 **Submitting** a file upload **File Types** zip
Available after Sep 17, 2018 at 8am

1. Write a program that prompts the user for an input that is an **int**. The input represents a `score` that the student received on a test. Your program should give **an error** if the input is not in a proper range (between 0 and 100 inclusive). For the valid input the program should calculate the letter grade (as a **char**) that the student will receive using the following mapping:

- `score` 0 - 59 -> F
- `score` 60 - 69 -> D
- `score` 70 - 79 -> C
- `score` 80 - 89 -> B
- `score` 90 -100 -> A

NOTE: Since the `score` is an int variable with values between 0 and 100, please note the following: if the `score` is 85, `score/10` is 8, if the `score` is 89, `score/10` is also 8; if the `score` is 62, `score/10` is 6, if the `score` is 68, `score/10` is also 6 and so on. You can use this expression as a switch variable and implement the program with a **switch** statement using the following mapping:

- case 0, case 1, case 2, case 3, case 4 and case 5 are all the same and they map to F
- case 6 maps to D
- case 7 maps to C
- case 8 maps to B
- case 9 and case 10 map to A
- default case should assign an F

The result must be calculated inside the `switch` but printed outside the `switch` statement. This example may help:

[RollDie.java](#) 

Use the following flow of the program:

*if input is **out of range***

{

give an error

```
}
```


```
else
```

```
{
```

*using **switch statement** compute the value of the letter grade as char*

outside of the switch block print the result

```
}
```

2. Write a program that takes a **String** as input from the keyboard, representing a year. Your program should do the following:
- utilize `matches` method to check if the input consists **only of digits**; if not give an error
 - for the valid input:
 - use **switch** statement on the length of the input
 - if the entered year has two characters, convert it to an int, add 2000 to it, and output it. `Integer.parseInt` method should be used to convert the input to its numeric representation
 - if the year entered has four characters just output it
 - if the year entered has neither two nor four characters (default case), output that the year is not valid
 - See attached sample runs: [SampleRuns.txt](#) 
3. Write a program that takes two Strings as inputs from the keyboard, representing a user ID and a password. Your program should do the following:
- if the user ID and the password are "admin" and "open", respectively, then output "Welcome"
 - if the user ID is "admin" but the password is not "open", output "Wrong password"
 - if the user ID is not "admin" but the password is "open", output "Wrong user ID"
 - otherwise, output "Sorry, wrong ID and password"
 - utilize **if/else** statements; call `equals` method to check the input