

MATLAB Marina: Conditional Statements, switch

1. Write a MATLAB program that will curve a grade entered by the user. The grade should be read from the user and should be an integer with 0 being the minimum grade and 100 being the maximum grade. The program should display the entered grade and the curved grade. The instructor who will use this program is a bit odd and desires the following curving scheme: if the grade is in the range of 0 to 60 curve by -5, if the grade is in the range of 61 to 85 give no curve, and if the grade is in the range of 86 to 100 curve by +5. Verify the operation of the program by testing it for the grades: 27, 60, 80, 86, and 98. Hint: this should be solved using if-else statement(s) and not a switch statement.
2. Modify the program of problem 1 so that the curved letter grade is also displayed. The curved letter grades are assigned using a standard scale: A (90 – 100), B (80 – 89), C (70 – 79), D (60 – 69), and F (< 60). Hint: this should be solved using if-else statement(s) and not a switch statement.
3. Write a MATLAB program that will display the name of the month given an integer number between 1 and 12 (1 for January, 2 for February, etc.). The number should be read in from the user and the program should display the name of the month or an error message if the number is not in the range of 1 to 12.
4. Write a MATLAB program that will display a menu with the donut choices: glazed, cake, jelly, and crème; and display the cost of the donut selected from the menu. The donut costs are: glazed \$0.50, cake \$0.50, jelly \$0.65, and crème \$0.80. The menu can be generated using the MATLAB statement `choice=menu('Donut Choices','glazed','cake','jelly','creme');` The menu generated is shown in Figure 1. The `menu` function will return an integer corresponding to the number of the button selected. The variable `choice` will be assigned the value corresponding to the menu button pressed.

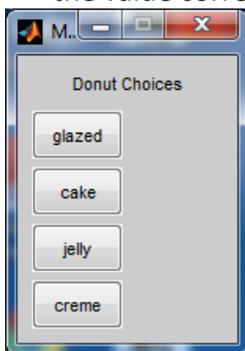


Figure 1. Donut Choice Menu

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