

CSCI 3327 Visual Basic (Fall 2011)

Assignment #2

Instructor: Dr. Xiang Lian
Due Date: Sept. 19 (Monday), 2011

Objective: Loops, text boxes & formatted output. (100 Marks)

Saving for future is a very necessary practice. Many of us do not know the power of *compounding interest*. Your assignment is to write a program that can be used to show people how much money they will have accumulated over their gainful employment period. An individual should start the account with an initial investment and then add to it every 30 days (If you want to write it so that it is added each month, rather than every 30 days, please do so. Remember, you have to add all additional math to figure out days in each month, interest for exact days of the month, etc.). The interest will be compounded (interest for one day added to the principle) on a daily basis. Create a table that shows yearly figures of: Age, beginning principle, Interest earned for the year, deposits for the year and ending principle.

Bonus (10 Marks): You are also asked to print the output to a sequential file called "report.txt" (when pressing the "PRINT" button). Submit the code and a printout of the output file. The output file should look the same as the one in the TextBox at the bottom of the window.

Reference: http://en.wikipedia.org/wiki/Compound_interest

Please submit:

1. Pseudo code to explain your assumptions (e.g., the (initial) deposit is the first day or the last day of a month) and the formula that you calculate the interests;
2. Program listing; and
3. The screen captures (as given in the Appendix).

- Your program should begin with a comment section that would include the following:

PROGRAMMERS NAME: _____

STUDENT ID: _____

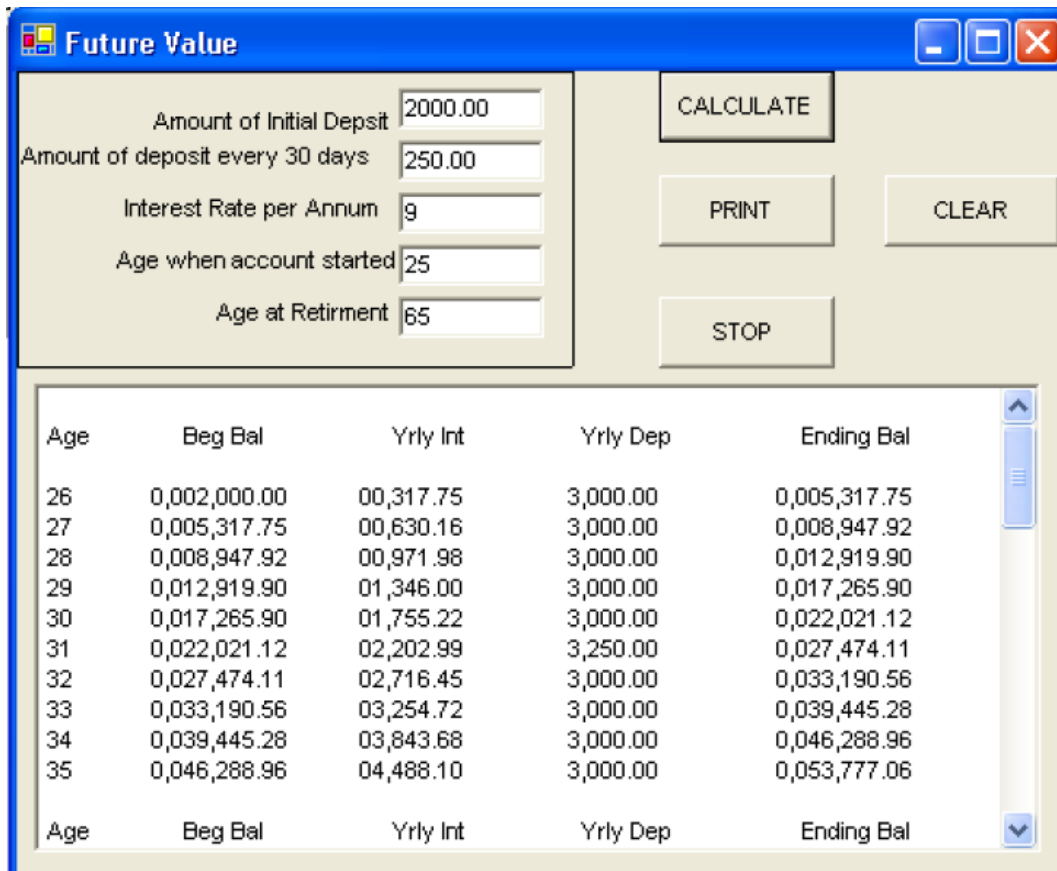
CLASS: _____ ASSIGNMENT #: _____

DATE DUE: _____ DATE TURNED IN: _____

- Send the compressed *.zip file you created (Note: If your email is bounced back, please change the file extension to *.dat and tell TA to change it back to *.zip file) to TA (zcjletter@gmail.com). The subject of the email must include the following information:
[CSCI 3327] [Assignment #] [Your Name Here] [Your Student ID Here]

Appendix: Examples of Screen Captures

The screen captures (including numbers) are only for illustration purposes.



The screenshot shows a software application window titled "Future Value". It contains several input fields for user data and a set of control buttons. Below the inputs is a table with five columns: "Age", "Beg Bal", "Yrly Int", "Yrly Dep", and "Ending Bal". The table displays data for ages 26 through 35. At the bottom of the table, the column headers are repeated.

Age	Beg Bal	Yrly Int	Yrly Dep	Ending Bal
26	0,002,000.00	00,317.75	3,000.00	0,005,317.75
27	0,005,317.75	00,630.16	3,000.00	0,008,947.92
28	0,008,947.92	00,971.98	3,000.00	0,012,919.90
29	0,012,919.90	01,346.00	3,000.00	0,017,265.90
30	0,017,265.90	01,755.22	3,000.00	0,022,021.12
31	0,022,021.12	02,202.99	3,250.00	0,027,474.11
32	0,027,474.11	02,716.45	3,000.00	0,033,190.56
33	0,033,190.56	03,254.72	3,000.00	0,039,445.28
34	0,039,445.28	03,843.68	3,000.00	0,046,288.96
35	0,046,288.96	04,488.10	3,000.00	0,053,777.06

Future Value

Amount of Initial Deposit: 2000.00

Amount of deposit every 30 days: 250.00

Interest Rate per Annum: 9

Age when account started: 25

Age at Retirement: 65

CALCULATE

PRINT

CLEAR

STOP

Age	Beg Bal	Yrly Int	Yrly Dep	Ending Bal
54	0,408,383.03	38,583.65	3,000.00	0,449,966.69
55	0,449,966.69	42,499.26	3,250.00	0,495,715.94
56	0,495,715.94	46,807.11	3,000.00	0,545,523.05
57	0,545,523.05	51,497.05	3,000.00	0,600,020.10
58	0,600,020.10	56,628.61	3,000.00	0,659,648.71
59	0,659,648.71	62,243.37	3,000.00	0,724,892.08
60	0,724,892.08	68,386.82	3,000.00	0,796,278.90
61	0,796,278.90	75,108.76	3,250.00	0,874,637.66
62	0,874,637.66	82,487.19	3,000.00	0,960,124.85
63	0,960,124.85	90,536.85	3,000.00	1,053,661.69
64	1,053,661.69	99,344.48	3,000.00	1,156,006.17
65	1,156,006.17	108,981.45	3,000.00	1,267,987.62