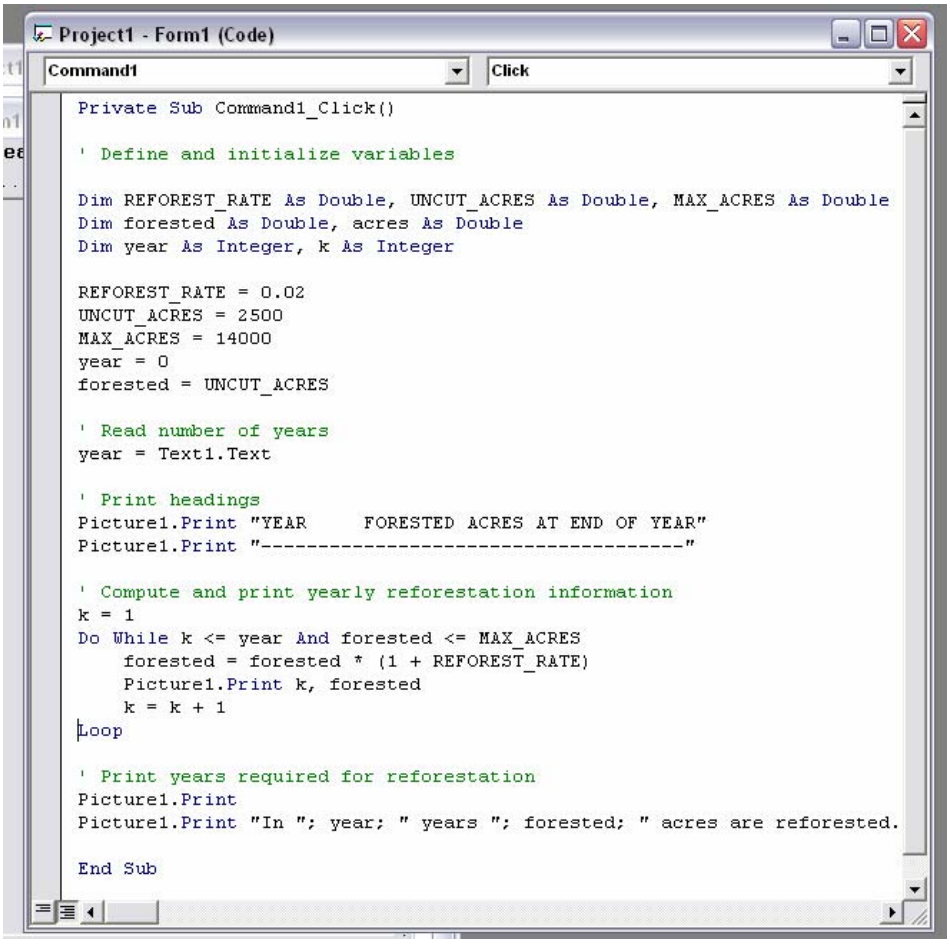
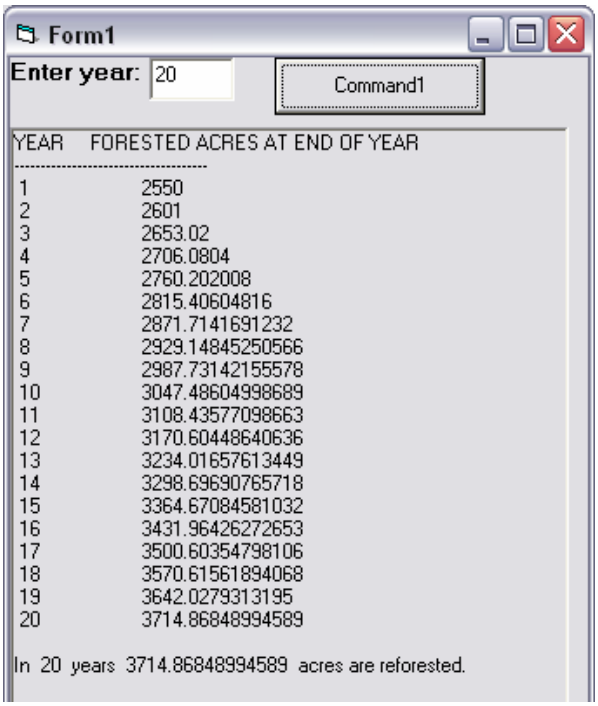
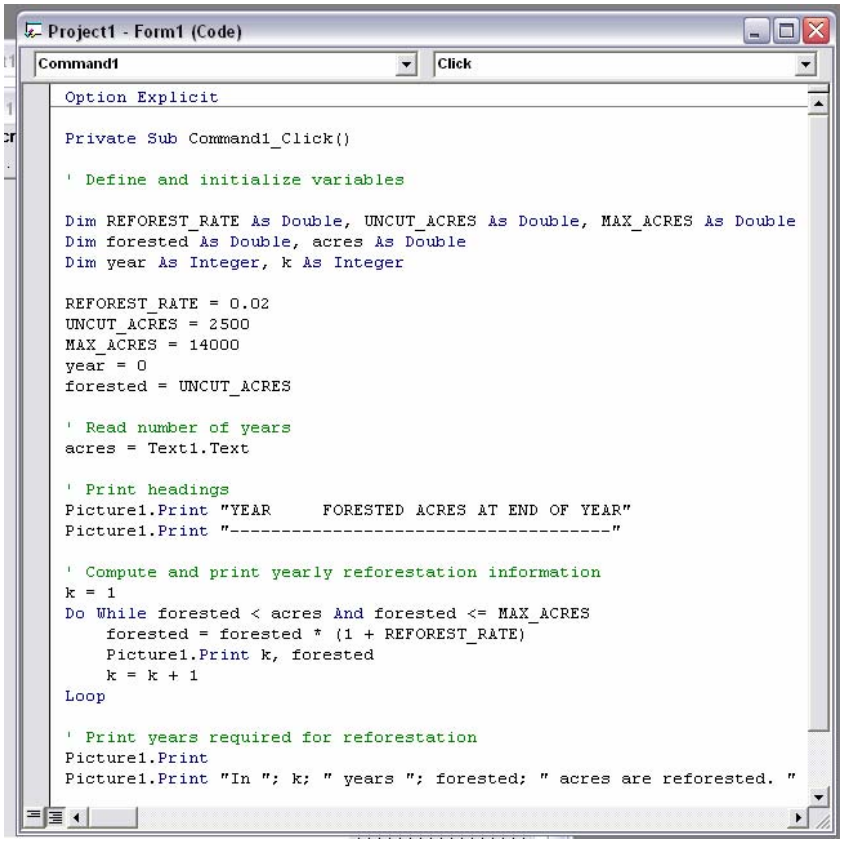
CE 311k – McKinney
Extra Credit Problem 1
Solution

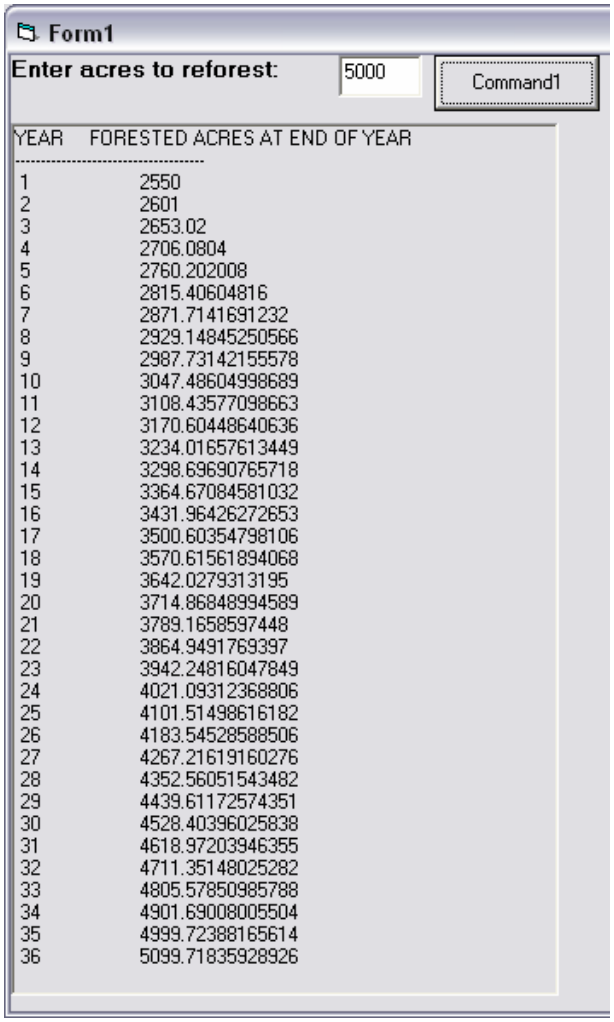
Part 1.




Form1
Enter year: 20
Command1
YEAR FORESTED ACRES AT END OF YEAR
1 2550
2 2601
3 2653.02
4 2706.0804
5 2760.202008
6 2815.40604816
7 2871.7141691232
8 2929.14845250566
9 2987.73142155578
10 3047.48604998689
11 3108.43577098663
12 3170.60448640636
13 3234.01657613449
14 3298.69690765718
15 3364.67084581032
16 3431.96426272653
17 3500.60354798106
18 3570.61561894068
19 3642.0279313195
20 3714.86848994589
In 20 years 3714.86848994589 acres are reforested.

Part 2.


Project1 - Form1 (Code)
Command1
Click
Option Explicit
Private Sub Command1_Click()
' Define and initialize variables
Dim REFOREST_RATE As Double, UNCUT_ACRES As Double, MAX_ACRES As Double
Dim forested As Double, acres As Double
Dim year As Integer, k As Integer
REFOREST_RATE = 0.02
UNCUT_ACRES = 2500
MAX_ACRES = 14000
year = 0
forested = UNCUT_ACRES
' Read number of years
acres = Text1.Text
' Print headings
Picture1.Print "YEAR FORESTED ACRES AT END OF YEAR"
Picture1.Print "-----------------------------------"
' Compute and print yearly reforestation information
k = 1
Do While forested < acres And forested <= MAX_ACRES
forested = forested * (1 + REFOREST_RATE)
Picture1.Print k, forested
k = k + 1
Loop
' Print years required for reforestation
Picture1.Print
Picture1.Print "In "; k; " years "; forested; " acres are reforested. "


Form1
Enter acres to reforest:
5000
Command1
YEAR FORESTED ACRES AT END OF YEAR
1 2550
2 2601
3 2653.02
4 2706.0804
5 2760.202008
6 2815.40604816
7 2871.7141691232
8 2929.14845250566
9 2987.73142155578
10 3047.48604998689
11 3108.43577098663
12 3170.60448640636
13 3234.01657613449
14 3298.69690765718
15 3364.67084581032
16 3431.96426272653
17 3500.60354798106
18 3570.61561894068
19 3642.0279313195
20 3714.86848994589
21 3789.1658597448
22 3864.9491769397
23 3942.24816047849
24 4021.09312368806
25 4101.51498616182
26 4183.54528588506
27 4267.21619160276
28 4352.56051543482
29 4439.61172574351
30 4528.40396025838
31 4618.97203946355
32 4711.35148025282
33 4805.57850985788
34 4901.69008005504
35 4999.72388165614
36 5099.71835928926