The following is VBA used for Project 2, including the Solver Add-on for Excel.

Option Explicit

Sub SolverRun()

Dim intElement As Integer, intReadValues(3) As Integer

Dim intByCity(1) As Integer, intSolverResults(5)

Dim lngRunCount As Long, lngRuns As Long

Dim intRowOffset As Integer, intColOffset As Integer

'Turn off automatic calculations and screen updating

Application.Calculation = xlCalculationManual

Application.ScreenUpdating = False

'Activate starting cells on all worksheets

ActiveWorkbook.Worksheets("ModelSheet").Activate

Range("C4").Activate

ActiveWorkbook.Worksheets("Demand").Activate

Range("B2").Activate

ActiveWorkbook.Worksheets("Shipments").Activate

Range("B2").Activate

'Outer loop to control number of runs, make an inputbox

lngRuns = InputBox("How many iterations for this model run?")

For lngRunCount = 1 To lngRuns

'Write demand values and total to model Demand section

Worksheets("ModelSheet").Activate 'to be sure at the top of the iterations For loop

'Update to C21:C24 when writing values using VBA

Worksheets("ModelSheet").Range("C4:C24").Calculate

For intElement = LBound(intReadValues) To UBound(intReadValues)

  ActiveCell.Offset(intElement, 0).Value = ActiveCell.Offset(intElement + 17, 0).Value

  intReadValues(intElement) = ActiveCell.Offset(intElement, 0).Value

Next 'intElement for demand in model

'Write demand values to Demand table on Demand worksheet

ActiveWorkbook.Worksheets("Demand").Activate

For intElement = LBound(intReadValues) To UBound(intReadValues)

  ActiveCell.Offset(0, intElement).Value = intReadValues(intElement)

Next 'intElement

'Add a new table row

ActiveCell.Offset(1, 0).Activate

'Run the Solver model

ActiveWorkbook.Worksheets("ModelSheet").Activate

SolverOk

'SetCell:="$C$16", MaxMinVal:=2, ValueOf:=0, ByChange:="$H$11:$I$13", \_

    Engine:=2, EngineDesc:="Simplex LP"

SolverSolve UserFinish:=True

'Read Solver solution into array

Range("B29").Activate

For intElement = LBound(intSolverResults) To UBound(intSolverResults)

  intSolverResults(intElement) = ActiveCell.Offset(0, intElement).Value

Next 'intElement for reading Solver output

'Reset active cell to C4 for next loop

Range("C4").Activate

'Write solution values to Shipments worksheet's Volume table

Worksheets("Shipments").Activate

For intElement = LBound(intSolverResults) To UBound(intSolverResults)

  ActiveCell.Offset(0, intElement).Value = intSolverResults(intElement)

Next 'intElement for writing Solver results

'Write total miles

ActiveCell.Offset(0, UBound(intSolverResults) + 5).Value = Worksheets("ModelSheet").Range("C16").Value

'Move down one row in Volume table

ActiveCell.Offset(1, 0).Activate

Next 'lngRunCount

'Turn on calculation and screen updates

Application.Calculation = xlCalculationAutomatic

Application.ScreenUpdating = True

End Sub