U.S. Resorts, Inc. is trying to decide whether to open a temporary ski shop at the Black Mountain Ski Resort this year (the first year of operations). This temporary ski shop will operate for five years. (A permanent ski shop will be opened in five years.) The following is an analysis of temporary ski shop’s cash flows for the next six years:

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,800,000</td>
<td>1,890,000</td>
<td>1,984,500</td>
<td>2,083,725</td>
<td>2,187,911</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGS</td>
<td>-1,170,000</td>
<td>-1,228,500</td>
<td>-1,289,925</td>
<td>-1,354,421</td>
<td>-1,422,142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease Expense</td>
<td>-375,000</td>
<td>-375,000</td>
<td>-375,000</td>
<td>-375,000</td>
<td>-375,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting / clerical</td>
<td>-40,000</td>
<td>-42,000</td>
<td>-44,100</td>
<td>-46,305</td>
<td>-48,620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales staff</td>
<td>-92,000</td>
<td>-96,600</td>
<td>-101,430</td>
<td>-106,502</td>
<td>-111,827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td>-110,000</td>
<td>-115,500</td>
<td>-121,275</td>
<td>-127,339</td>
<td>-133,706</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxable Income</td>
<td>13,000</td>
<td>32,400</td>
<td>52,770</td>
<td>74,159</td>
<td>96,616</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income Tax (34%)</td>
<td>-4,420</td>
<td>-11,016</td>
<td>-17,942</td>
<td>-25,214</td>
<td>-32,850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>8,580</td>
<td>21,384</td>
<td>34,828</td>
<td>48,945</td>
<td>63,767</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Capital</td>
<td>-100,000</td>
<td>-121,500</td>
<td>-6,075</td>
<td>-6,379</td>
<td>-6,698</td>
<td>92,967</td>
<td>147,684</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>-100,000</td>
<td>-112,920</td>
<td>15,309</td>
<td>28,449</td>
<td>42,247</td>
<td>156,734</td>
<td>147,684</td>
</tr>
</tbody>
</table>

NPV at 12% 22,238

These are the assumptions used in the cash flow statement presented above:

1. U.S. Resorts is an accrual basis corporation.
2. In the ski shop project, the firm buys inventory (ski clothing, ski equipment, etc.) and resells the inventory to the public. Assume the firm wants to maintain $75,000 of inventory at all times throughout the five-year project.
3. The project will produce revenue of $1,800,000 in year one. Revenue is expected to grow at 5% per year. Cost of goods sold equals 65% of revenue.
4. Lease expenses (for the building and equipment) is $375,000 per year.
5. Accounting / clerical expense is $40,000 in year one, growing at 5% per year.
6. Sales staff and other expenses are $92,000 and $110,000, respectively, in year one and will both grow at 5% per year.
7. Assume there is no depreciation and no inflation.
8. Cash of $25,000 is needed to start the project and is maintained throughout the life of the project.
9. End of period accounts receivable is equal to 10% of the year’s revenue, and account payable is equal to 5% of the year’s CGS.
10. Use a 12% discount rate to calculate the project NPV.

For your assignment, your boss has asked you to recalculate the spreadsheet and project NPV under the following three sets of assumptions. Each of these three spreadsheets is worth 2 2/3 points.

A. Change year one “revenue” from $1,800,000 to $2,000,000. Change the CGS percentage from 65% to 70%. Print spreadsheet (2 2/3 points)
B. Change year one “accounting / clerical” expense from $40,000 to $35,000. Change year one “sales staff” from $92,000 to $102,000. Print spreadsheet (2 2/3 points)
C. Change “inventory” balance from $75,000 to $95,000. Change “accounts receivable” percentage from 10% to 8%. Change “accounts payable” percentage from 5% to 10%. Print spreadsheet (2 2/3 points)

At each step, change back to the original set of assumptions before making the next required change in assumptions.

Directions

1. This problem set is worth 10 points. You are expected to turn in a professionally written solution to the problem set, including an executive summary (1 – 2 pages) of the problem, your main findings, and recommendations. (Make sure you state in your executive summary whether the project should be accepted or rejected under each of the four sets of assumptions.) Supporting analysis should be attached to the executive summary. Two of the ten points are used to grade your presentation. Incorrect conclusions, faulty reasoning, spelling errors, grammatical errors, or poor presentation will result in a reduction in this portion of your score. Eight points are allocated to your numerical solutions.
2. Each of the three spreadsheets will be graded in the following manner:
   A. Project NPV = 2/3 point
   B. Yearly cash flows = 2/3 point
   C. Yearly working capital adjustments = 2/3 point
   D. Yearly taxable income = 2/3 point
3. Warning: You must get an item entirely correct to get credit. One error causes a full loss in credit. For instance, an error in one of the year’s cash flows will cause your score on the spreadsheet to decrease by 2/3 point.
4. Warning: If you get an “early” answer wrong, it could cause all of your other answers to be incorrect. For instance, if you incorrectly calculate one of the taxable income numbers, you will probably get the working capital adjustment, cash flows, and project NPV incorrect.
5. You can turn your assignment one day late without penalty, as long as it is turned in before February 21, 2002, 5 p.m. After that time, your score will be reduced by 2 points. Another 2 points will be taken off your score for each additional “school” day the assignment is turned in late. (See syllabus for more details.)
6. You must get the answer exactly correct (to the dollar) to receive credit (e.g., $12,345). For instance, if the correct answer is $12,345 and you give $12,347 as an answer, it will be marked as wrong. Also, an answer rounded to too few decimal places is also wrong. For instance, $12 thousand will also be marked as wrong in the above example.
7. Remember you can work together in groups of four, and compare your answers with other groups.
8. Please refer to Handout #3 for another example of this type of problem.
9. Your solutions must be printed on a computer printer or typed.
10. You will be given an opportunity to repeat the assignment for one-half credit (5 points maximum). Of course, this option will only help you if your score is less than 5 points. The makeup assignment will have the same type of problems, but with different assumptions. This opportunity is not available if you turn in the assignment later than 5 p.m., February 21, 2002.