Outcomes

• To be able to log into the Monash Computer Network
• To become familiar with the location of the IMS1906 resources
• To know your tutor’s name, programming experience and availability for consultation
• To gain an understanding about objects and classes

EXERCISE 1 [30 mins]

1. Your tutor will introduce him/herself and provide you with email details and consultation times and location.
2. Get to know your class/neighbours (see Appendix – Ice breaker activity)
3. Have a class discussion about your experience with the programming.

EXERCISE 2 [30 mins]

Ensure you have the Computer Resources 2005 booklet (available from ITS) and be able to use your Novell and Authcate username and password. You should change your password immediately if you have not already done so since you were given it.

1. Find the SIMS Web site and browse it
2. Find IMS1906 Web site and browse it. Try downloading the lecture notes, and save them onto your disk.
3. Send an email to your tutor specifying what previous experience of computer use and programming you have, and whether you have a computer at home. Use the email account that you plan to use during the semester, not necessarily your student account. Your tutor will use these to create a distribution list so that he/she can email all the students in your tute with messages from time to time. You should check your email regularly.
EXERCISE 3 [30 mins]

a) In an article written by Szymanski it is stated that “a good program meets various criteria”; program flexibility is one such criteria. What does it mean for a program to be flexible?

b) In groups of 3-4, consider the following algorithm:

```
CalculateIncome
  1 Set earnings = 0
  2 Set taxes = 0

  3 Read num_clients
  4 Set cur_client = 0

  5 Do While (cur_client < num_clients)
     6 Display “Enter income from client job ”, cur_client
     7 Read job_income
     8 Increment earnings by job_income
     9 If job_income > 5000 Then
        10        job_taxes = job_income * 0.15
      11 Else
        12        job_taxes = job_income * 0.09
      13      End If
     14 Increment taxes by job_taxes
     15          End Do

  16 Display “Total Earnings:”, earnings
  17 Display “Taxes:” job_taxes
END.
```

a) Identify the control structures used in the above algorithm

b) What basic computer operations are used in the example above

c) Represent the above algorithm using a flowchart

d) Provide sets of test data values that would result in the algorithm being thoroughly tested.

e) For each set of values chosen, explain how you came up with the test data set.
Appendix A – Getting to know your class

Find a student in your lab that satisfies one of the criteria (row + column) in the table below. Once you have found someone get them to put their signature in the box. Each signature must be unique. Make sure you have spoken to everyone in the room.

<table>
<thead>
<tr>
<th>Has Cable connection</th>
<th>Has programmed in VB v6</th>
<th>Speaks a European language</th>
<th>Speaks an Asian language</th>
<th>Has programmed in VB.NET</th>
<th>Likes Visual Basic Programming</th>
<th>Likes public speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drives to uni</td>
<td></td>
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<tr>
<td>Catches a bus to uni</td>
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<tr>
<td>Walks to uni</td>
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<tr>
<td>Lives near the campus</td>
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<tr>
<td>Has a part-time job</td>
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</tbody>
</table>