### **Lab 5**

### **Program 1:**

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| --- | --- | --- |
| Input | Processing | Output |
| In state  Credit hours | Processing items: none  Algorithm:  1. enter in-state (y/Y or n/N)  2. enter credit hours  3. if in-state then cost is credit hours \* 50. Tuition cost will be no more than 500  4. if not in-state then cost is credit hours \* 400. Tuition cost will be no more than 6000  5. Display tuition cost | Total tuition cost |

### **Program 2:**

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| --- | --- | --- |
| Input | Processing | Output |
| Height (in)  Weight (lb) | Processing items: bmi  Algorithm:  1. enter height and weight  2. calculate bmi: 703 \* weight / height2  3. if bmi under 18.5, underweight  if bmi >= 18.5 && < 25, normal  if bmi >= 25 && < 30, overweight  if bmi >= 30, obese  4. output the user's body weight category | Message displaying what body weight category the user is in |

### **Program 3:**

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| --- | --- | --- |
| Input | Processing | Output |
| Number of registrants | Processing items: none  Algorithm:  1. enter number of registrants  2. if registrants between 1 and 5, fee per person is 100  if registrants between 6 and 10, fee per person is 80  if registrants > 11, fee per person is 60  3. total fee is registrants \* fee per person (output it) | The total fee due |

### **Program 4:**

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Health plan code | Processing items: none  Algorithm:  1. enter health plan code (e/E, s/S, f/F)  2. if code is e, premium is 40  if code is s, premium is 160  if code is f, premium is 200  3. output the premium | The insurance premium |