1. Recall the general syntax of formatted output:
   
   "<string with N format operators embedded >" % (<datum1>, ..., <dataN>)
   
   with the string containing a format operator corresponding to each data item in the tuple. The formats for each
   type of date are:

<table>
<thead>
<tr>
<th>Data Type</th>
<th>General Format Operator</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>string</td>
<td>%&lt;field width&gt;d</td>
<td>&quot;%8s&quot; % 'house'</td>
</tr>
<tr>
<td>integer</td>
<td>%&lt;field width&gt;d</td>
<td>&quot;%7d&quot; % 1234</td>
</tr>
<tr>
<td>float</td>
<td>%&lt;field width&gt;.&lt;precision&gt;f</td>
<td>&quot;%8.2f&quot; % 11.234</td>
</tr>
</tbody>
</table>

   A positive field width specifies right-justification, and a negative specifies left-justification.

   Predict the output of the following program:

   ```
   a = 123
   s = "cat"
   f = 456.789
   print "a is %10d, s is %10s, \nf is %3.2f" % (a + 3,s,f)
   ```

2. Complete the flow chart for the given code that used only if statements to output the appropriate string according to variable temperature’s value.

   ```
   temperature = input("Enter the temperature: ")
   if temperature < 0:
       print "Its bitterly cold!"
   if temperature >= 0 and temperature <= 32:
       print "Its freezing outside."
   if temperature > 32 and temperature < 68:
       print "Light jacket weather."
   if temperature > 68:
       print "Its warm outside."
   ```

   ![Flow chart for temperature check]
3. Complete the flow chart for the given code that used only if-else statements to output the appropriate string according to variable temperature’s value.

```python
temperature = input("Enter the temperature: ")
if temperature < 0:
    print "Its bitterly cold!"
else:
    if temperature <= 32:
        print "Its freezing outside."
    else:
        if temperature < 68:
            print "Light jacket weather."
        else:
            print "Its warm outside."
```

4. How would your above flow-chart differ for the below code that uses an if-elif-else statement to output the appropriate string according to variable temperature’s value?

```python
temperature = input("Enter the temperature: ")
if temperature < 0:
    print "Its bitterly cold!"
elif temperature <= 32:
    print "Its freezing outside."
elif temperature < 68:
    print "Light jacket weather."
else:
    print "Its warm outside."
```