**Programming – Selection**

**Handout 1 – Selection Tasks**

**Task 1 - Conditions**

What do these conditions return?

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| **Condition** | **Returns (True/False)** |
| 5 == 5 | T |
| 5 != 5 | F |
| 6 < 4 | F |
| 4 >= 4 | T |
| 4 > 4 | F |
| "Giraffe” == “Giraffe” | T |
| "Giraffe” == “giraffe” | F |
| "Giraffe” != “Hippo” | T |

**Task 2 – Predict Selection**

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| **Predict 2.1 Sample Program**  A screenshot of a computer  Description automatically generated |
| Predict what you think this code does. |
| Output:  Old enough to vote  End of program |
| [Click here to run the code](https://trinket.io/python3/d013e2ccdd) see if you were right. Note down any differences from your prediction below. |
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| **Predict 2.2 Sample Program** |
| Predict what you think this code does. |
| Output:  End of program |
| [Click here to run the code to](https://trinket.io/python3/616b83c40a) see if you were right. Note down any differences from your prediction below. |
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| **Predict 2.3 Sample Program** |
| Predict what you think this code does. |
| Output:  End of program |
| [Click here to run the code to](https://trinket.io/python3/b82a60fff5) see if you were right. Note down any differences from your prediction below. |
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**Task 3 – Predict Selection With Two Branches**

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| **Predict 3.1 Sample Program** |
| Predict what you think this code does. |
| Output:  You are not old enough to learn to drive.  End of program |
| [Click here to run the code to](https://trinket.io/python3/001402ab9e) see if you were right. Note down any differences from your prediction below. |
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| **Predict 3.2 Sample Program** |
| Predict what you think this code does. |
| Output:  This is a valid month  End of program |
| [Click here to run the code to](https://trinket.io/python3/a1ee9dcd9c) see if you were right. Note down any differences from your prediction below. |
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**Task 4 – Modify Selection With Two Branches**

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| This program determines whether a month number is valid. |
| [Click here to open the code online.](https://trinket.io/python3/d8d47d015d) |
| Change the program so that it checks if a child is eligible for preschool as follows:   * The program should get the user to input their child's age in years. * The child must be aged between 2 and 5 inclusive, i.e. 2, 3, 4 or 5 for preschool. * Output an appropriate message for each situation (eligible/not eligible). |
| Paste the finished code below  A screenshot of a computer program  Description automatically generated |

**Task 5 – Modify Selection With More Than Two Branches**

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| This program is part of an adventure game.  A white background with red text  Description automatically generated |
| [Click here to open the code online.](https://trinket.io/python3/4f4b79239c) |
| Change the code so that:   * For an input of 'w', give the output 'Oh no! You are sinking in a bubbling marsh!' * For an input of 's', give the output 'Phew! You are scaling a craggy peak.' * For all other inputs, give the output 'That's not a direction I recognise'. |
| Paste the finished code below |

**Task 6 – Make Selection With More Than Two Branches**

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| **Which Room Program**  Write a program that asks the user to input:   * their name * which subject they are studying.     The program should output a message telling the student by name which room to go to for that class. Include these subjects:    Computing , 401  Music , 404  History , 302  English , 345  Any other subject input should get an output of 'I don't know that subject'.    Example - an input of 'Ben' and 'Computing' would output:  'Hi Ben, go to room 401 for Computing'  **Explorer task:**  Use iteration and data structures to make your program more efficient.   * Create two lists. One should store the subjects and one should store the corresponding room numbers. * Iterate over the list to find the matching subject and output the appropriate message to the user. |
| [Click here for the starter code](https://trinket.io/python3/d9a095fd8b) |
| Paste the finished code below  A screenshot of a computer code  Description automatically generated  **Explorer task solution:** |

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