**Intermediate Python Reference Sheet**

**Integers and Strings**

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| number = 4 # This is an integer  name = "Alice" # This is a string |

**Maths Operations in Python**

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| a = 7 + 3 # Addition  b = 5 - 1 # Subtraction  c = 4 \* 6 # Multiplication  d = 8 / 2 # Division |

**Converting between Strings and Integers**

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| a = int("1") # String to integer  b = str(2) # Integer to string |

**Modifying the Contents of a Variable**

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| likes = likes + 1 # Increase `likes` by 1  likes = likes - 1 # Decrease `likes` by 1 |

**if, elif and else**

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| if name == "Alice":  print("Have you been to Wonderland?")  elif name == "Bob":  print("Can we fix it? Yes we can!")  elif name == "Charlie":  print("I love chocolate!")  else:  print("Nice to meet you, " + name)  # only ONE of these options will run  # if more than one are True, the first  # one that is true will be run |

**Boolean Variables and Expressions**

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| keep\_going = True # this is True  name\_match = False # this is False  print(1 + 1 == 2) # will print True  print(2 + 2 == 3) # will print False |

**Repeating Code (while Loops)**

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| keep\_going = True # flag variable  while keep\_going == True:  password = input("Enter your PIN:")  if password == "1234": # nested IF  keep\_going = False # update flag  print("Welcome inside!") # exited loop |

**Comparison Operators**

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| a < b # a is less than b  c > d # c is greater than d  e <= f # e is less than OR equal to f  g >= h # g is greater than OR equal to h |

**Generating Random Numbers**

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| from random import randint # required  number = randint(1,10) # generates a  # random number  # between 1 and 10 |

**String Functions**

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| name.isupper() # True if name contains  # all upper case letters  name.islower() # True if name contains  # all lower case letters |

**in and or Operators**

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| --- |
| "Alice" in name # True if "Alice" is  # contained in `name`  "Alice" in name or "Bob" in name  # True if "Alice" is contained in `name`  # OR if "Bob" is contained in `name` |