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| **INSY336 Data Handling and Coding for Analytics** |

**1. while loops**

1. Write a while loop to print numbers in increments of 2 till 10 (0,2,4,6,8,10)

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| **Code** |
| x=0  while x<=10:  print(x)  x=x+2 |

1. Write a while loop to print numbers in reverse order (5,4,3,2,1)

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| **Code** |
| x=5  while x>0:  print(x)  x=x-1 |

1. Write a while loop to print numbers in reverse order in multiples of 2 (10,8,6,4,2)

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| **Code** |
| x=10  while x>0:  print(x)  x=x-2 |

**2. Infinite Loop & Break**

Build a program to guess the number chosen from the python (1-50) based on infinite loop and break statement [Watch lecture 4\_A\_While(2) for the detail description ]

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| 1) Select an arbitrary integer number between 1 and 50.      answer=random.randint(1,50).  2) Use infinite loop to repeat the iteration until the user guesses the true number.  3) Get user input until user guess the true value and compare this number with the answer.  4) If the user input is equal to the answer, break the loop and print out the message(“correct”)  5) If not, continue the loop and give a hint to the user.       If the user’s input is smaller than the answer print (“too small”)        If the user’s input is larger than the answer print (“too large”) |

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| **Code** |
| import random  a=random.randint(1,50)  while True:  a1=int(input('Guess the number between 1-50?'))  if a1==a:  print('correct')  break  elif a1<a:  print('Too small')  else:  print('too large') |

**3. While & Continue Statement**

1) Write a while loop to print odd numbers using continue statement. (1,3,5,7,9)

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| **Code** |
| x=0  while x <10:  x=x+1  if x%2==0:  continue  print(x) |

1. Write a while loop to print even numbers in reverse order using continue statement. (10,8,6,4,2)

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| **Code** |
| x=12  while x > 1:  x=x-1  if x%2==1:  continue  print(x) |

**4. Function**

1) Write a function that takes the temperature in Celsius and returns it in Fahrenheit



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| **Code** |
| def c(arg):  f1=9/5\*arg+32  return f1  print(c(32)) |

2) Write a function that takes the weight and height and returns BMI



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| **Code** |
| def c(w,h):  bmi=w/(h\*\*2)  return bmi  print(c(10,2)) |