

ANSWERS TO PRACTICE QUESTIONS - WHILE LOOP

1.	<pre>no=int(input("Enter a number")) product=1 while no!=0: d=no%10 product=product*d no=no//10 print("The product of all digits",product)</pre>
2.	<pre>no=int(input("Enter a number")) rev=0 x=no while no!=0: d=no%10 rev=rev*10+d no=no//10 if x==rev: print("It is a palindrome") else: print("It is not a palindrome")</pre> <div style="border: 1px solid black; padding: 5px; margin-left: 200px; width: fit-content;"> <p>First find the reverse of the number and then check if the reverse is equal to the original number. Since in the loop no finally becomes zero so we store the original number in variable x.</p> </div>
3.	<pre>no=int(input("Enter a number")) sum_odd=sum_even=0 while no!=0: d=no%10 if d%2==0: sum_even=sum_even+d else: sum_odd=sum_odd+d no=no//10 print("Sum of all odd digits",sum_odd) print("Sum of all even digits",sum_even)</pre>
4.	<pre>no=int(input("Enter a number")) sum=0 x=no while no!=0: d=no%10 sum=sum+d**3 no=no//10 if x==sum: print("It is an Armstrong number") else: print("It is not an Armstrong number")</pre>

5.	<pre>ans="y" sum=0 count=0 while ans=="Y" or ans=="y": no=int(input("Enter a number")) fact=1 for i in range(1,no+1): fact=fact*i print("The factorial of",no,"is",fact) ans=input("Do you wish to read more number(Y/N)?")</pre> <p>This part of the program finds the factorial of no.</p>
6.	<pre>import math ans="y" while ans=="Y" or ans=="y": print("MENU") print("1.AREA OF A SQUARE") print("2.AREA OF A RECTANGLE") print("3.AREA OF A CIRCLE") ch=int(input(" Enter your choice:")) if ch==1: side=float(input("Enter the side:")) area=side*side print("The area of the square is",area) elif ch==2: length=float(input("Enter the length:")) breadth=float(input("Enter the breadth:")) area=length*breadth print("The area of the rectangle is",area) elif ch==3: rad=float(input("Enter the radius:")) area=math.pi*rad*rad print("The area of the square is",area) else: print("Invalid choice") ans=input("Do you wish to continue(Y/N)?")</pre>
7.	<pre>for no in range(300,400): sum=0 x=no while no!=0: d=no%10 sum=sum+d**3 no=no//10 if x==sum: print(x,end=" ")</pre> <p>The variable no ranges from 300 to 400.</p> <p>This part of the program displays the variable x if the number is a palindrome. Since the original number will become zero in the loop, it is stored in x.</p>

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- Jini Mathai