Heading of line

Hi i have just started

In [1]:

```
x = 2
y = 5 + x
y
```

Out[1]:

```
7
```

In [2]:

```
print('aman')
```

```
aman
```

concept using type()

In [3]:

```
bucket = 16
print(type(bucket))
```

```
<class 'int'>
```

In [4]:

```
bucket = "Aman"
print(type(bucket))
```

```
<class 'str'>
```

In [5]:

```
bucket = 'Dubey'
print(type(bucket))
```

```
<class 'str'>
```

In [6]:

```
type('single quoting')
```

Out[6]:

```
str
```

In [7]:

```
type("double quoting")
```

Out[7]:

str

In [8]:

```
type("12")
```

Out[8]:

str

In [9]:

```
type(12)
```

Out[9]:

int

In [10]:

```
type(-12)
```

Out[10]:

int

In [11]:

```
type(12.0)
```

Out[11]:

float

In [12]:

```
type(1.55)
```

Out[12]:

float

In [13]:

```
type(type(3))
```

Out[13]:

type

Number and String

In [14]:

```
6 + 3 + 9
```

Out[14]:

18

In [15]:

```
1.25 + 8
```

Out[15]:

```
9.25
```

In [16]:

```
"This notebook belongs to " + "aman"
```

Out[16]:

```
'This notebook belongs to aman'
```

In [17]:

```
sm_number = 98
big_number = 45.6
sm_number + big_number
```

Out[17]:

```
143.6
```

In [18]:

```
first_name = "Dad"
first_name + ", remember to save the notebook frequently"
```

Out[18]:

```
'Dad, remember to save the notebook frequently'
```

In [19]:

```
new_msg = "My favourite food is" + " rajma rice"
print(new_msg)
```

```
My favourite food is rajma rice
```

In [20]:

```
new_msg1 = 0
new_msg1 = new_msg1 + 3
new_msg1 = new_msg1 + 4
print(new_msg)
```

```
My favourite food is rajma rice
```

In [21]:

```
new_msg_2 = new_msg + " and paneer"
print(new_msg_2)
```

```
My favourite food is rajma rice and paneer
```

Errors

Type Error

In [22]:

```
print("my number is" + 123)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-22-c29a2d43ba74> in <module>()
----> 1 print("my number is" + 123)

TypeError: must be str, not int
```

In [ ]:

```
print("my number is " + "123")
```

In [ ]:

```
total_cost = 3 + "45"
print(total_cost)
```

In [ ]:

```
total_cost = 3 + 45
print(total_cost)
```

In [ ]:

```
school_num = 123
print("the street number of Central School is " + school_num)
```

In [ ]:

```
school_num = "123"
print("the street number of Central School is " + school_num)
```

Hypothesis

In [ ]:

```
print(type(3.3))
print(type(3))
print(3.3 + 3)
print(type(3.3 + 3))
```

Syntax Error

In [ ]:

```
print('my socks do not match")
```

In [ ]:

```
print('my socks do not match')
```

In [ ]:

```
print"Save the notebook frequently")
```

In [ ]:

```
print("Save the notebook frequently")
```

Name Error

pront("my socks match now")

In [ ]:

```
print("my socks match now")
```

In [ ]:

```
student_name = "Alton"
print(Student_Name)
```

In [ ]:

```
student_name = "Alton"
print(student_name)
```

ASCII ART

Character Art

In [ ]:

```
# the letter 'A'
print("     *")
print("    * *")
print("   *****")
print("  *     *")
print(" *       *")
print()
```

In [ ]:

```
# flying bird
print("_         _")
print(" \       /")
print("  \. ./")
print("    v")
```

In [ ]:

```
# capital letter 'E'
print("****")
print("**")
print("****")
```

User Input

user input

In [ ]:

```
print("Enter student name>>")
student_name = input()
```

In [ ]:

```
print(type(student_name))
```

In [ ]:

```
print("enter a name or number")
test_input = input()
print(type(test_input))
```

In [ ]:

```
print("enter a name or number")
test_input = input()
print(type(test_input))
```

In [ ]:

```
print("enter a name or number")
test_input = input()
print(type(test_input))
```

Input prompt

In [ ]:

```
city = input("Enter the city")
print("the city name is " + city)
```

In [ ]:

```
name = input("name = ")
age = input("age = ")
wants_email = input("want email = ")
print("**********************")
print("name = " + name)
print("age = " + age)
print("Do " + name + " wants email?" + wants_email)
```

Print formatting

In [ ]:

```
name = "Pikachu"
print("I like " + name)
```

In [ ]:

```
print("Everyone loves ",name,"because he is cute")
```

Printing numbers with strings using commas

In [ ]:

```
num = 56
name = "Mr.Pratap"
print("My neighbor ",name,"is ",num, "years old")
```

print() number, strings, variables from input

In [25]:

```
name = input("Enter the name of customer")
no_of_order = input("No of order given by " + name)
print(name," has given ",no_of_order, "orders of computers to be delivered
in",10, "weeks")
```

```
Enter the name of customerMr. Amit Shah
No of order given by Mr. Amit Shah50
Mr. Amit Shah  has given  50 orders of computers to be delivered in 10 week
s
```

In [28]:

```
owner = input("enter name for contact person for training group: ")
num_people = input("enter the total attending the course: ")
training_time = input("enter the traning time selected:")
print("-------------------------------------------------")
print("Remainder: training is schedule at ", training_time, "for the ", own
er, "group of ",num_people,"attendees")
print("Please arrive ", 10, "minutes early for the first class")
```

```
enter name for contact person for training group: Mr. Narendra Modi
enter the total attending the course: 50
enter the traning time selected:3:30
-------------------------------------------------
Remainder: training is schedule at  3:30 for the  Mr. Narendra Modi group o
f  50 attendees
Please arrive  10 minutes early for the first class
```

Quote display & Boolean

Quote

In [29]:

```
print("Where's the homework?")
```

```
Where's the homework?
```

In [31]:

```
print('"Education is what remains after one has forgotten what one has lear
```

```
ned in school" - Albert Einstein')
```

```
"Education is what remains after one has forgotten what one has learned in
school" - Albert Einstein
```

Boolean

.isalpha(), .isalnum(), .istitle(), .isdigit(), .islower(), .isupper(), .startswith()

In [33]:

```
"aman".isalpha()
```

Out[33]:

```
True
```

In [35]:

```
"233".isalnum()
```

Out[35]:

```
True
```

In [36]:

```
"The Life Of Pie".istitle()
```

Out[36]:

```
True
```

In [37]:

```
"The Life Of pie".istitle()
```

Out[37]:

```
False
```

In [40]:

```
"223f2".isdigit()
```

Out[40]:

```
False
```

In [42]:

```
"elephant".islower()
```

Out[42]:

```
True
```

In [43]:

```
"MAN".isupper()
```

Out[43]:

```
True
```

In [44]:

```
"Standard".startswith('S')
```

Out[44]:

```
True
```

String Formatting & "in" keyword

Using string formatting method

.captalize(), .lower(), .upper(), .swapcase()

In [45]:

```
fav_food = input("Enter your favourite food:")
```

```
Enter your favourite food:Shahi Paneer
```

In [48]:

```
print("Your favourite food is: ", fav_food.upper())
```

```
Your favourite food is:  SHAHI PANEER
```

In [49]:

```
print("Your favourite food is: ", fav_food.lower())
```

```
Your favourite food is:  shahi paneer
```

In [50]:

```
print("Your favourite food is: ", fav_food.swapcase())
```

```
Your favourite food is:  sHAHI pANEER
```

In [51]:

```
print("Your favourite food is: ", fav_food.capitalize())
```

```
Your favourite food is:  Shahi paneer
```

Formatting String input

.lower(), .upper()

In [52]:

```
fav_color = input("Enter your favourite color: ").lower()
print(fav_color)
```

```
Enter your favourite color: Green
green
```

In [53]:

```
fav_color = input("Enter your favourite color: ").upper()
print(fav_color)
```

```
Enter your favourite color: Black
BLACK
```

Boolean "in" keyword

In [54]:

```
menu = " salad, pasta, sandwich, pizza, drinks,dessert"
check_item = input("Enter item to find in menu:").lower()
print(check_item in menu.lower())
```

```
Enter item to find in menu:Pizza
True
```

In [56]:

```
add_item = input("Enter item to be added in menu:")
new_menu = menu + ", " +  add_item
print(new_menu)
check_item = input("Enter item to find in menu:").lower()
print(check_item in new_menu.lower())
```

```
Enter item to be added in menu:burger
 salad, pasta, sandwich, pizza, drinks,dessert, burger
Enter item to find in menu:pasta
True
```

In [57]:

```
paint_colors = "red, blue, green, black, orange, pink"
print('Red in paint colors = ', red in paint_colors)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-57-6ddb92f40e6c> in <module>()
      1 paint_colors = "red, blue, green, black, orange, pink"
----> 2 print('Red in paint colors = ', red in paint_colors)

NameError: name 'red' is not defined
```

In [58]:

```
paint_colors = "red, blue, green, black, orange, pink"
print('Red in paint colors = ', "red" in paint_colors)
```

```
Red in paint colors =  True
```

In [59]:

```
name = "SKYE HOMSI"
print("y" in name.lower())
```

```
True
```

PRACTICE MODULE

In [60]:

```
# print 'Hello!' and remember to save notebook!
print('Hello')
```

```
Hello
```

In [61]:

```
print('watch for the cat')
```

```
watch for the cat
```

In [ ]:

```
## Aman's Notebook editing
```

In [65]:

```
print("aman", end = ' ')
print("is using python")
```

```
aman is using python
```

In [66]:

```
your_name = "Aman Dubey"
print(your_name)
```

```
Aman Dubey
```

In [70]:

```
favourite_song = "She go make you move to Miami"
shoe_size = 8
lucky_number = 2
print("on singing my fav song ", favourite_song," in public, people through shoe on him most of them were of size ",shoe_size," which is dividend of my lucky number ",lucky_number)
```

```
on singing my fav song  She go make you move to Miami  in public, people th
rough shoe on him most of them were of size  8  which is dividend of my luc
ky number  2
```

In [71]:

```
# PRINT ART
```

In [73]:

```
print("*")
print("  *")
print("    *")
print("      *")
```

```
*
  *
```

```
    *
      *
```

In [75]:

```
print("************")
print("*          *")
print("*          *")
print("************")
```

```
************
*          *
*          *
************
```

In [78]:

```
print(" *   *")
print("   v")
```

```
 *   *
   v
```

In [79]:

```
print(type(your_name))
```

```
<class 'str'>
```

In [80]:

```
print(type("save your notebook!"))
```

```
<class 'str'>
```

In [81]:

```
print(type("25"))
```

```
<class 'str'>
```

In [82]:

```
type("save your notebook" + your_name)
```

Out[82]:

```
str
```

In [83]:

```
type(25)
```

Out[83]:

```
int
```

In [84]:

```
type(25 + 10)
```

Out[84]:

```
int
```

In [85]:

```
type(1.55)
```

Out[85]:

```
float
```

In [86]:

```
type(1.55 + 25)
```

Out[86]:

```
float
```

In [87]:

```
student_name = "Gus"
student_age = 16
student_grade = 3.5
student_id = "ABC-000-000"
```

In [88]:

```
print(type(student_name))
```

```
<class 'str'>
```

In [89]:

```
print(type(student_age))
```

```
<class 'int'>
```

In [91]:

```
print(type(student_grade))
```

```
<class 'float'>
```

In [92]:

```
print(type(student_age + student_grade))
```

```
<class 'float'>
```

In [93]:

```
type(student_id)
```

Out[93]:

```
str
```

In [94]:

```
student_id = "FHE-3333-222"
```

In [95]:

```
type(student_id)
```

Out[95]:

Out[95]:

```
str
```

In [96]:

```
x = 345
y = 453
z = 54
xyz_sum = x + y + z
print(xyz_sum)
```

```
852
```

In [97]:

```
# ASCII ART
```

In [99]:

```
print("    *    *   *   *   *  *")
print("   * *   ** **  * *  ** *")
print("  *****  * * * ***** * **")
print(" *     * *   **     **  *")
```

```
    *    *   *   *   *  *
   * *   ** **  * *  ** *
  *****  * * * ***** * **
 *     * *   **     **  *
```

In [116]:

```
print("            mmmmmmm")
print("            l o o l")
print("---OOO---------U--------------------")
print("|   ALL                            |")
print("|          THE                     |")
print("|               VERY               |")
print("|                     BEST         |")
print("---------------------------OOO------")
print("           |___| |___|")
print("             ||    ||")
```

```
            mmmmmmm
            l o o l
---OOO---------U--------------------
|   ALL                            |
|          THE                     |
|               VERY               |
|                     BEST         |
---------------------------OOO------
           |___| |___|
             ||    ||
```

OPTIONAL PRACTICE

In [103]:

```
remind_me = input("Remind me:")
print("remember ",remind_me)
```

```
Remind me:You are having exam
remember  You are having exam
```

In [105]:

```
meeting_subject = input("What is the meeting subject?: ")
meeting_time = input("What is meeting time?: ")
print("-------------------------")
print("Meeting Subject:", meeting_subject)
print("Meeting Time:", meeting_time)
```

```
What is the meeting subject?: plan for graduation
What is meeting time?: 3:00 PM on Monday
-------------------------
Meeting Subject: plan for graduation
Meeting Time: 3:00 PM on Monday
```

In [113]:

```
vehicle_name = input("enter the vehicle name: ")
print("all alpha:", vehicle_name.isalpha())
print("all alphabet and number:", vehicle_name.isalnum())
print("is capitalized:",vehicle_name.istitle())
print("all lowercase:", vehicle_name.islower())
```

```
enter the vehicle name: Mercedes
all alpha: True
all alphabet and number: True
is capitalized: True
all lowercase: False
```

In [115]:

```
vehicle_color = input("enter the vehicle color: ")
print("all alpha:", vehicle_color.isalpha())
print("all alphbet and number:", vehicle_color.isalnum())
print("is capitalized:",vehicle_color.istitle())
print("all lowercase:", vehicle_color.islower())
```

```
enter the vehicle color: Blue
all alpha: True
all alphbet and number: True
is capitalized: True
all lowercase: False
```

In [117]:

```
capitalize_this = "the TITLE is Noon"
capitalize_this.capitalize()
```

Out[117]:

```
'The title is noon'
```

In [118]:

```
swap_this = "wHO writes LIKE tHIS?"
swap_this.swapcase()
```

Out[118]:

```
'Who WRITES like This?'
```

In [119]:

```
whisper_this = "Can you hear me?"
whisper_this.lower()
```

Out[119]:

```
'can you hear me?'
```

In [120]:

```
yell_this = "Can you hear me NOW!?"
yell_this.upper()
```

Out[120]:

```
'CAN YOU HEAR ME NOW!?'
```

In [122]:

```
format_input = input('enter a string to reformat: ').upper()
print(format_input)
```

```
enter a string to reformat: Hi people
HI PEOPLE
```

In [123]:

```
format_input = input('enter a string to reformat: ').lower()
print(format_input)
```

```
enter a string to reformat: what's up
what's up
```

In [124]:

```
format_input = input('enter a string to reformat: ').swapcase()
print(format_input)
```

```
enter a string to reformat: What Is haPPeninG
wHAT iS HAppENINg
```

In [125]:

```
format_input = input('enter a string to reformat: ').capitalize()
print(format_input)
```

```
enter a string to reformat: this is fun
This is fun
```

boolean: short_str in long str

In [3]:

```
animals_input = input("enter animal name:")
```

```
enter animal namemonkey dog tiger lion;
```

In [4]:

```
print('cat' in animals_input)
```

```
False
```

In [6]:

```
color = input("enter the name of color: ")
print(" do color name starts with blue?:",color.startswith('b'))
```

```
enter the name of color: blue
 do color name starts with blue?: True
```

Program: Guess what I'm reading

In [7]:

```
can_read = input('enter 1 word item that can be read:')
can_read_things = input('enter 3 items that can be read')
print("is ",can_read,"present in",can_read_things,"?:",can_read.lower() in
can_read_things.lower())
```

```
enter 1 word item that can be read:paper
enter 3 items that can be readnewspaper, jupyter notebook, blog
is  paper present in newspaper, jupyter notebook, blog ?: True
```

Program: Allergy Check

In [10]:

```
input_test = input("enter food eaten in last 24 hours:")
input_find = input("enter food to find in list")
print("It is",input_find.lower() in input_test.lower(),"that", input_test,
"contains ",input_find)
```

```
enter food eaten in last 24 hours:seafood, dairy, nuts, and chocolate cake
enter food to find in listnUTs
It is True that seafood, dairy, nuts, and chocolate cake contains  nUTs
```

In [12]:

```
input_test = input("enter food eaten in last 24 hours:")
input_find = input("enter food to find in list")
print("It is",input_find.lower() in input_test.lower(),"that", input_test,
"contains",input_find)
```

```
enter food eaten in last 24 hours:seafood, dairy, nuts, and chocolate cake
enter food to find in listseaFOOD
It is True that seafood, dairy, nuts, and chocolate cake contains seaFOOD
```

In [13]:

```
input_test = input("enter food eaten in last 24 hours:")
input_find = input("enter food to find in list")
print("It is",input_find.lower() in input_test.lower(),"that", input_test,
"contains",input_find)
```

```
enter food eaten in last 24 hours:seafood, dairy, nuts, and chocolate cake
enter food to find in listDairy
It is True that seafood, dairy, nuts, and chocolate cake contains Dairy
```