

TASK 1

1.Code:

```
def add_numbers(a,b)
    return a+b
print(add_numbers(5,10))
```

Error:

Syntax error

Corrected code:

```
def add_numbers(a,b):
    return a+b
print(add_numbers(5,10))
```

Explanation of error:

It is Syntax error because we want to define colon(:) it is missing after function definition

2.Code:

```
name="Alice
print("Hello, "+name)
```

Error:

Syntax error

Corrected code:

```
name="Alice"
print("Hello, "+name)
```

Explanation of error:

It will give error since The string assigned to name starts with a double-quote ("), but there's no corresponding closing quote.

3.Code:

```
for i in range(5)
    print("Number: "+i)
```

Error:

Syntax error

Corrected code:

```
for i in range(5):
    print(("Number: ",i))
```

Explanation of error:

It is Syntax error because we want to define colon(:) it is missing after declaring for loop

4.Code:

```
my_list = [1, 2, 3, 4, 5]
print("The fifth element is: " + my_list[5])
```

Error:

Index Error:list index out of range

Corrected code:

```
my_list = [1, 2, 3, 4, 5]
print("The fifth element is: ",my_list[4])
```

Explanation of error:

Python uses zero-based indexing, which means:The first element is at index 0 .so the 5th element will be at the index of 4 and there is no 6th element in the list we cannot access the index 5.and we cannot add string and integer so + is not used we can use , instead of +.

5.Code:

```
def greet(name):
    print("Hello " + name)
greet("Bob")
```

Error:

Indentation error

Corrected code:

```
def greet(name):  
    print("Hello " + name)  
greet("Bob")
```

Explanation of error:

It is Indentation error because Python expected the next line to be indented more than you provided. In Python, the function's body must be indented relative to its declaration

6.Code:

```
age=input("Enter your age: ")  
if age >= 18:  
    print("You are eligible to vote.")  
else:  
    print("You are not eligible to vote.")
```

Error:

Type error

Corrected code:

```
age=int(input("Enter your age: ") )  
if age >= 18:  
    print("You are eligible to vote.")  
else:  
    print("You are not eligible to vote.")
```

Explanation of error:

The problem is that input() always returns a string, even if the user types a number. That means age here is a string like "18", not the integer 18. When you write age >= 18, Python tries to compare a string with an integer

7.Code:

```
def multiply(a, b):  
    result = a * b  
  
    return result  
print(multiply(4, 5))
```

Error:

Indentation error

Corrected code:

```
def multiply(a, b):  
    result = a * b  
    return result  
print(multiply(4, 5))
```

Explanation of error:

It is Indentation error because Python expected the next line to be indented more than you provided. In Python, the function's body must be indented relative to its declaration and the return is not indented so it shows error.

8.Code:

```
count = 10  
while count > 0  
    print(count)  
    count -= 1  
print("Countdown complete!")
```

Error:

Syntax error

Corrected code:

```
count = 10  
while count > 0:
```

```
print(count)
count -= 1
print("Countdown complete!")
```

Explanation of error:

It is Syntax error because we want to define colon(:) it is missing after declaring while loop