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Sub : - Python Programming

ALA : - 1

Errors and Corrections in the Given Code

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1. Broken Variable Name

Error Line:

```
total
_time = 0
```

Correct Line:

```
total_time = 0
```

Explanation:
The variable name was split into two lines. Python treats this as invalid syntax. The correct variable name should be written in one line without spaces.

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2. Wrong Comparison Symbol

Error Line:

```
while i ‹ trips:
```

Correct Line:

```
while i < trips:
```

Explanation:
The symbol ‹ is invalid in Python. The correct less-than operator is <.

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3. Missing Indentation in While Loop

Error Line:

```
while i < trips:
distance = int(input("Enter distance: "))
```

Correct Line:

while i < trips:
distance = int(input("Enter distance: "))

Explanation:
Python requires proper indentation inside loops. The statement inside the while loop must be indented.

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4. Incorrect Variable Update (Broken Again)

Error Line:

total
_time = total_time + time

Correct Line:

total_time = total_time + time

Explanation:
The variable name was again split into two lines, causing a syntax error.

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5. Space Inside Variable Name

Error Line:

average_speed = total_ distance / total
_time

Correct Line:

average_speed = total_distance / total_time

Explanation:
Variable names cannot contain spaces. Also, the statement must be written on one single line.

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6. Incorrect Print and If Statement

Error Line:

print ("Average Speed:", average speed if average_speed > 60:

Correct Lines:

print("Average Speed:", average_speed)

if average_speed > 60:

Explanation:

- average speed contained a space.
- The if condition was written incorrectly inside the print statement.
- The colon : was misplaced.

The print statement and the if condition must be written separately.

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7. Possible Division by Zero

Problematic Line:

average_speed = total_distance / total_time

Safe Correct Version:

```
if total_time == 0:
   print("Cannot calculate average speed")
else:
   average_speed = total_distance / total_time
```