

CAP 776: PROGRAMMING IN PYTHON

CONTINUOUS ASSESSMENTS (C.A)-1

ST_NAME : - EKHLAKH AHMAD
REG NO. : - 12209166
ROLL NO. : - RD2215B65
SECTION : - D2215
GROUP : - 2

Q.1. we have m number of heads and n number of legs among the chickens and rabbits in a farm.

how many rabbits and how many chickens do we have?

store the output in the form of dictionary.

and display the output as given example.

Example: {23 number of chickens, 12 number of rabbits}

{"chickens": number of chickens, "rabbits": number of rabbits:}

CODE: -

```
def find_chickens_and_rabbits(heads, legs):
    for num_chickens in range(heads + 1):
        num_rabbits = heads - num_chickens
        if 2 * num_chickens + 4 * num_rabbits == legs:
            return {"chickens": num_chickens, "rabbits": num_rabbits}
    return None

def get_input():
    while True:
        try:
            m = int(input("Enter the total number of heads: "))
            n = int(input("Enter the total number of legs: "))
            return m, n
        except ValueError:
            print("Please enter valid numerical values for heads and legs.")

if __name__ == "__main__":
    m, n = get_input()
    result = find_chickens_and_rabbits(m, n)
```

```
if result:  
    print(result)  
else:  
    print("No valid solution found.")
```

OUTPUT: -

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS D:\VS CODE\Music-Player> python -u "d:\VS CODE\05. PYTHON PROGRAMS\CA\CA_1.py"  
Enter the total number of heads: 35  
Enter the total number of legs: 120  
{'chickens': 10, 'rabbits': 25}  
PS D:\VS CODE\Music-Player> █
```