

JoePayyappilly_227_Lab3

August 12, 2023

Question 1

```
[ ]: def joe(stringsplit):  
    news = stringsplit.split('_')  
    ss=[]  
    for new in news:  
        if new!='':  
            ss.append(new)  
  
    name = ss[0]  
    domain_name = ss[1]  
    regno = ss[2]  
    convdict = {  
        "name": name,  
        "Domain_name": domain_name,  
        "Regno": regno  
    }  
  
    return convdict  
  
details = "Joe__Physics___2347227"  
answer = joe(details)  
print(answer)
```

```
{'name': 'Joe', 'Domain_name': 'Physics', 'Regno': '2347227'}
```

Question 2

```
[ ]: class physics:  
    def __init__(self, name):  
        self.name = name  
  
    class Mechanics(physics):  
        def __init__(self, name, laws):  
            super().__init__(name)  
            self.laws = laws
```

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class Electromagnetism(physics):
    def __init__(self, name, equations):
        super().__init__(name)
        self.equations = equations

class NewtonianMechanics(Mechanics):
    def __init__(self, name, laws, principles):
        super().__init__(name, laws)
        self.principles = principles

class QuantumMechanics(Mechanics):
    def __init__(self, name, laws, theories):
        super().__init__(name, laws)
        self.theories = theories

class Electrostatics(Electromagnetism):
    def __init__(self, name, equations, phenomena):
        super().__init__(name, equations)
        self.phenomena = phenomena

class Electrodynamics(Electromagnetism):
    def __init__(self, name, equations, applications):
        super().__init__(name, equations)
        self.applications = applications

class PhysicsApplication(physics):
    def __init__(self, name, applications):
        super().__init__(name)
        self.applications = applications

newtonian_mechanics = NewtonianMechanics("Newtonian Mechanics", "Three Laws of
↳Motion", "Inertia")
quantum_mechanics = QuantumMechanics("Quantum Mechanics", "Duality nature of
↳light", "De Broglie Wavelength")
electrostatics = Electrostatics("Electrostatics", "Coulomb's Law", "Electric
↳Charges and Fields")
electrodynamics = Electrodynamics("Electrodynamics", "Maxwell's Equations",
↳"Electromagnetic Waves")
physics_application = PhysicsApplication("Physics Application", "Engineering,
↳Medical Physics, Astronomy")

```

```
print(newtonian_mechanics.name)
print(newtonian_mechanics.laws)
print(newtonian_mechanics.principles)
print(quantum_mechanics.name)
print(quantum_mechanics.laws)
print(quantum_mechanics.theories)
print(electrostatics.name)
print(electrostatics.equations)
print(electrostatics.phenomena)
print(electrodynamics.name)
print(electrodynamics.equations)
print(electrodynamics.applications)
print(physics_application.name)
print(physics_application.applications)
```

Newtonian Mechanics
Three Laws of Motion
Inertia
Quantum Mechanics
Duality nature of light
De Broglie Wavelength
Electrostatics
Coulomb's Law
Electric Charges and Fields
Electrodynamics
Maxwell's Equations
Electromagnetic Waves
Physics Application
Engineering, Medical Physics, Astronomy