Gradient Calculation for tensorns with pytorch Steps: 1. Create tensors x and y with values 3 and 4 respectively. 2. Calculate the tensor z for x^2+5y+3. 3. Find the gradients for the equations with respective to x and y. Hint: use grad attribute for tensors x and y.

In [1]:
```
import torch

# Create tensors with gradient tracking
### BEGIN SOLUTION
x = torch.tensor([3.0], requires_grad=True)
y = torch.tensor([4.0], requires_grad=True)
### END SOLUTION

# Perform operations for given equation
### BEGIN SOLUTION
z = (x**2+ 5*y + 3)
### END SOLUTION

# Compute gradients of z with respect to x and y.
### BEGIN SOLUTION
z.backward()
### END SOLUTION

# Access gradients
#The gradients are stored in the .grad attribute of the respective tensors
print(f"x.grad: {x.grad}")  #dz/dx  (x**2+ 2*y + 3)
print(f"y.grad: {y.grad}")  #dz/dy (x**2+ 2*y + 3)
```

```
x.grad: tensor([6.])
y.grad: tensor([5.])
[NVSHARE][WARN]: Couldn't open file /var/run/secrets/kubernetes.io/serviceaccou
nt/namespace to read Pod namespace
[NVSHARE][INFO]: Successfully initialized nvshare GPU
[NVSHARE][INFO]: Client ID = 0345614a31f5cdf5
```

In [ ]:
```
```