**AIM:**Write a program to implement MISSIONARIE AND CANNIBAL PROBLEM.

**SOURCE CODE:**

class CannibalProblem:

def \_\_init\_\_(self, start\_state=(3, 3, 1)):

self.start\_state = start\_state

self.goal\_state = (0, 0, 0)

# you might want to add other things to the problem,

# like the total number of missionaries (which you can figure out

# based on start\_state

# get successor states for the given state

def get\_successors(self, state):

# you write this part. I also had a helper function

# that tested if states were safe before adding to successor list

# I also had a goal test method. You should write one.

def \_\_str\_\_(self):

string = "Missionaries and cannibals problem: " + str(self.start\_state)

return string

## A bit of test code

if \_\_name\_\_ == "\_\_main\_\_":

test\_cp = CannibalProblem((5, 5, 1))

print(test\_cp.get\_successors((5, 5, 1)))

print(test\_cp)

**OUTPUT:**

