**Lab Exercise 20- Rectangle Rotaion Animation using PySide6**

Below is an example of how you can create a PySide6 application that rotates a rectangle upon mouse click:

import sys

from PySide6.QtWidgets import QApplication, QMainWindow

from PySide6.QtGui import QPainter, QPen, QBrush

from PySide6.QtCore import Qt

class RectangleRotationApp(QMainWindow):

def \_\_init\_\_(self):

super().\_\_init\_\_()

self.setWindowTitle("Rectangle Rotation on Mouse Click")

self.setGeometry(100, 100, 400, 300)

self.angle = 0

def mousePressEvent(self, event):

self.angle += 30

self.update()

def paintEvent(self, event):

painter = QPainter(self)

painter.setRenderHint(QPainter.Antialiasing)

rect\_size = 100

painter.translate(self.width() // 2, self.height() // 2)

painter.rotate(self.angle)

painter.setPen(QPen(Qt.black, 2, Qt.SolidLine))

painter.setBrush(QBrush(Qt.blue, Qt.SolidPattern))

painter.drawRect(-rect\_size // 2, -rect\_size // 2, rect\_size, rect\_size)

if \_\_name\_\_ == '\_\_main\_\_':

app = QApplication(sys.argv)

window = RectangleRotationApp()

window.show()

sys.exit(app.exec())

Save this code to a file named rectangle\_rotation.py and run it using the following command:

python rectangle\_rotation.py

This script will display a PySide6 window containing a blue rectangle. Clicking anywhere inside the window will rotate the rectangle by 30 degrees each time you click. You can adjust the rotation angle and other parameters as needed to customize the behavior of the application.