CMPE 496 – HW1

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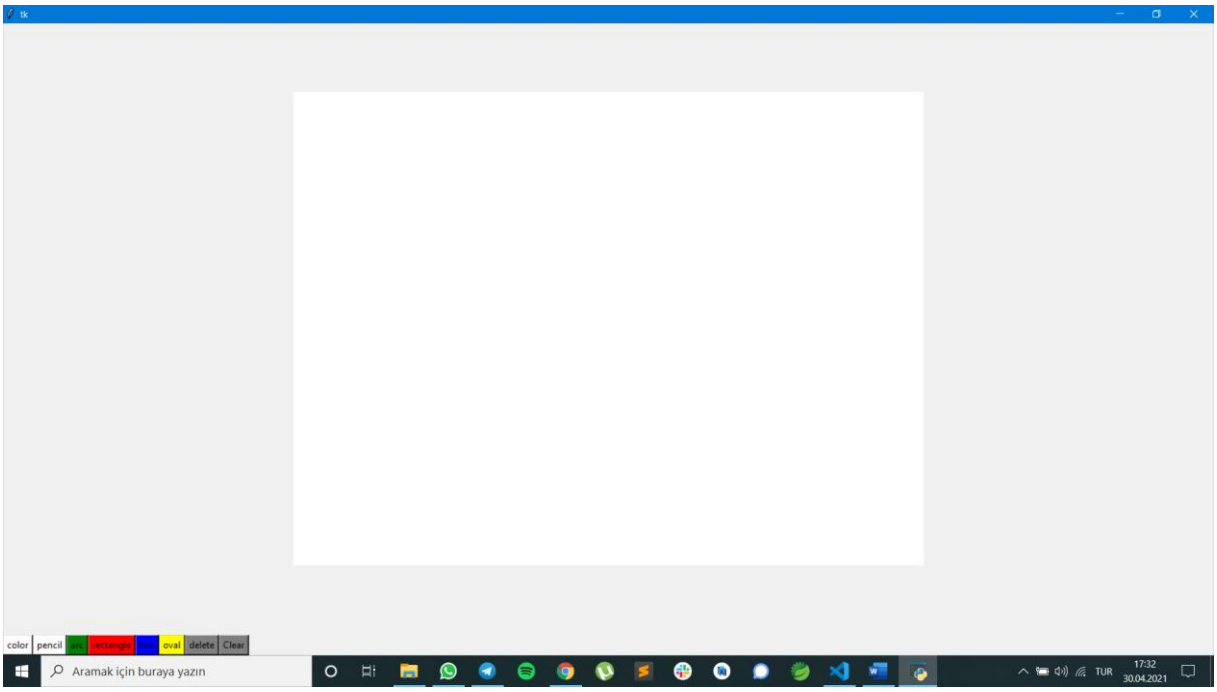
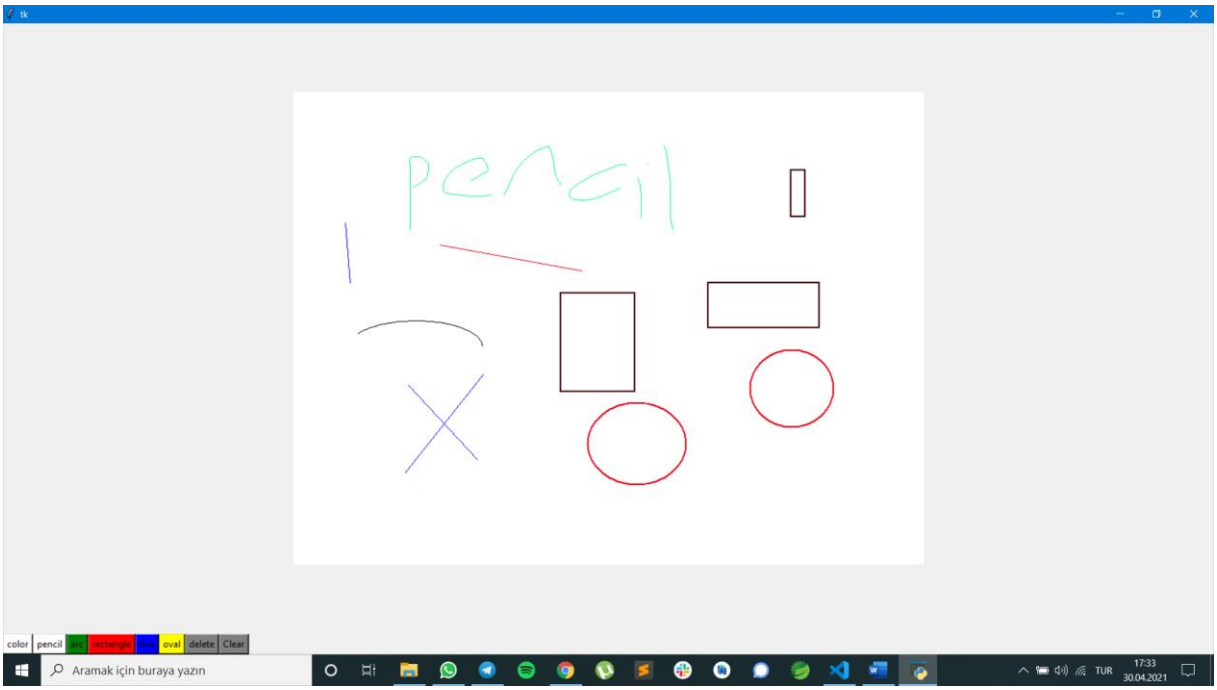
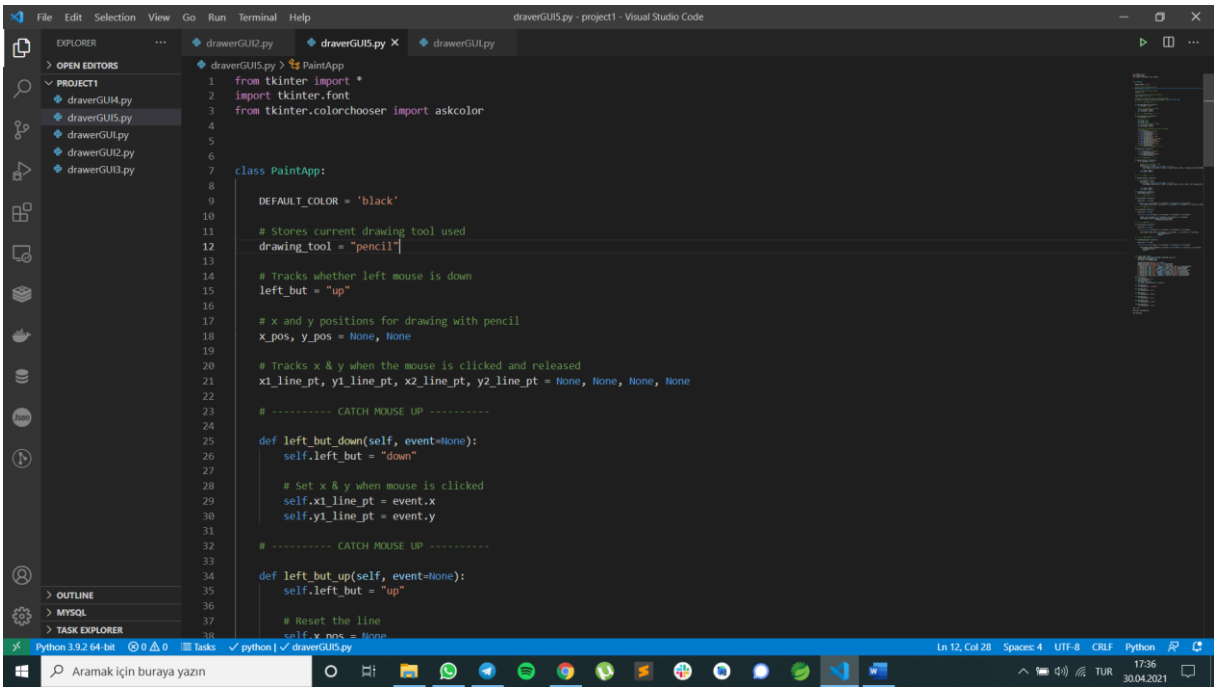
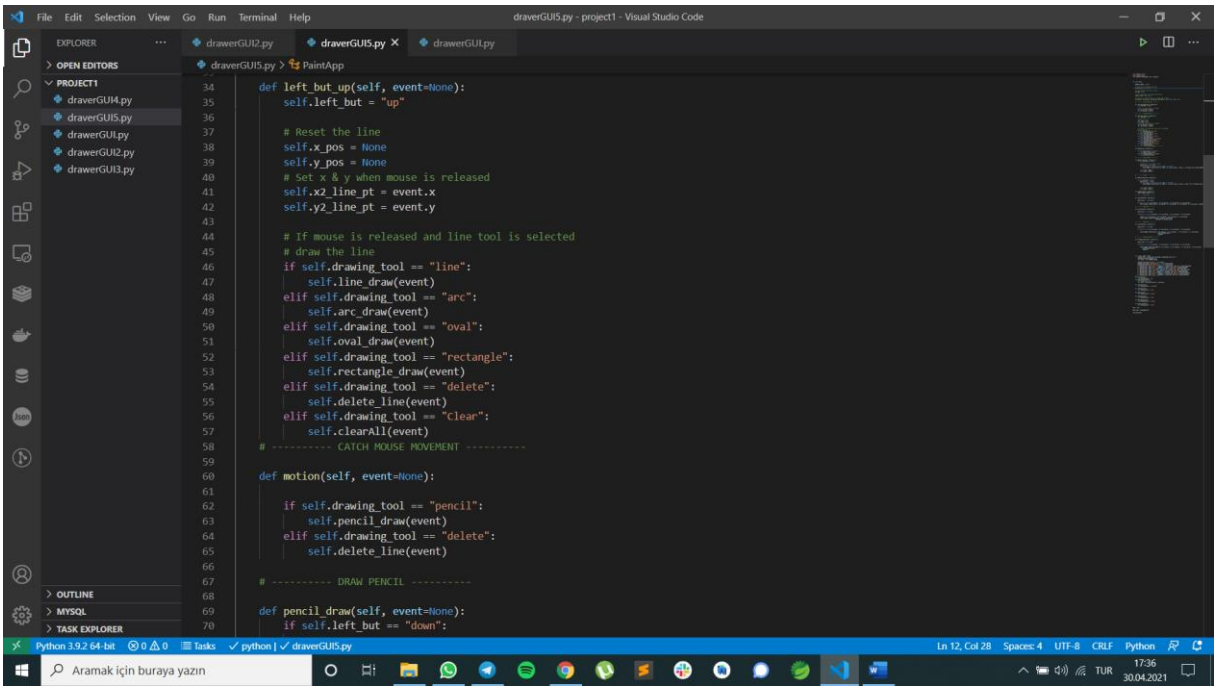
In this Project I created an paint-like drawing editor that you can create arc, rectangle, line, oval objects and choose whatever color yo want. GUI is like below.





Code is below. Code is pretty clear and self-explanatory.




File Edit Selection View Go Run Terminal Help
draverGUI5.py - project1 - Visual Studio Code
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def left_but_up(self, event=None):
self.left_but = "up"
# Reset the line
self.x_pos = None
self.y_pos = None
# Set x & y when mouse is released
self.x2_line_pt = event.x
self.y2_line_pt = event.y
# If mouse is released and line tool is selected
# draw the line
if self.drawing_tool == "line":
self.line_draw(event)
elif self.drawing_tool == "arc":
self.arc_draw(event)
elif self.drawing_tool == "oval":
self.oval_draw(event)
elif self.drawing_tool == "rectangle":
self.rectangle_draw(event)
elif self.drawing_tool == "delete":
self.delete_line(event)
elif self.drawing_tool == "Clear":
self.clearAll(event)
# ---------- CATCH MOUSE MOVEMENT ----------
def motion(self, event=None):
if self.drawing_tool == "pencil":
self.pencil_draw(event)
elif self.drawing_tool == "delete":
self.delete_line(event)
# ---------- DRAW PENCIL ----------
def pencil_draw(self, event=None):
if self.left_but == "down":
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Aramak için buraya yazın
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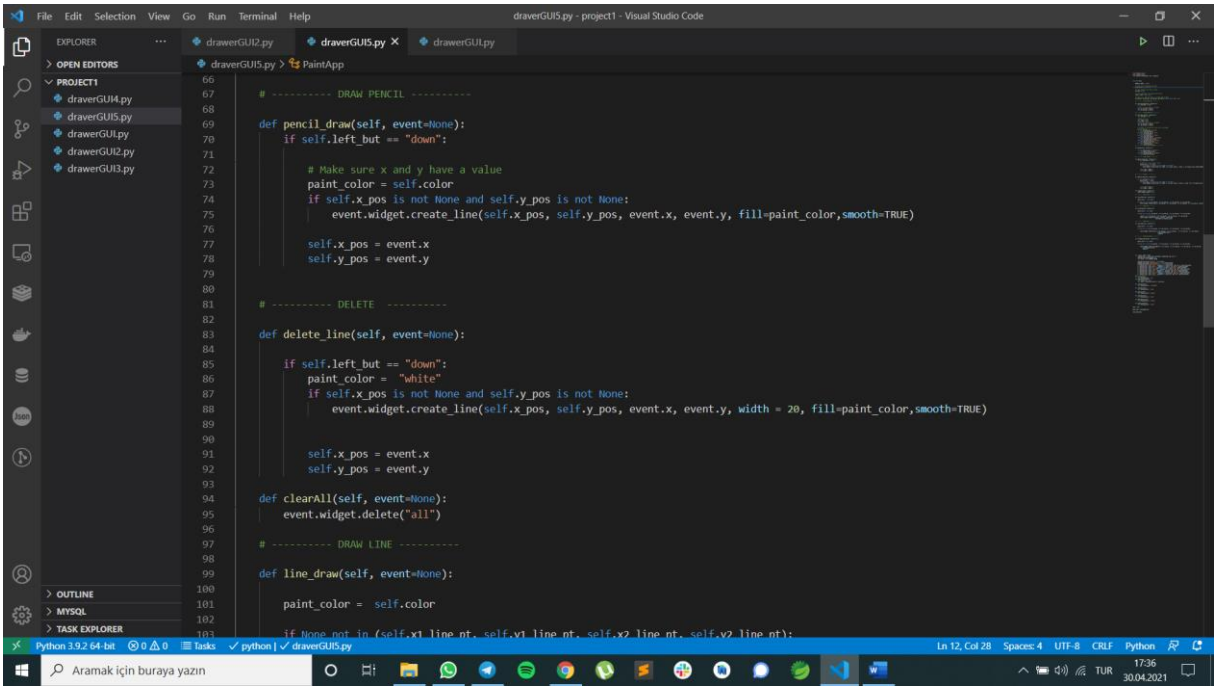
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# ---------- DRAW PENCIL ----------
def pencil_draw(self, event=None):
if self.left_but == "down":
# Make sure x and y have a value
paint_color = self.color
if self.x_pos is not None and self.y_pos is not None:
event.widget.create_line(self.x_pos, self.y_pos, event.x, event.y, fill=paint_color,smooth=TRUE)
self.x_pos = event.x
self.y_pos = event.y
# ---------- DELETE ----------
def delete_line(self, event=None):
if self.left_but == "down":
paint_color = "white"
if self.x_pos is not None and self.y_pos is not None:
event.widget.create_line(self.x_pos, self.y_pos, event.x, event.y, width = 20, fill=paint_color,smooth=TRUE)
self.x_pos = event.x
self.y_pos = event.y
def clearAll(self, event=None):
event.widget.delete("all")
# ---------- DRAW LINE ----------
def line_draw(self, event=None):
paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
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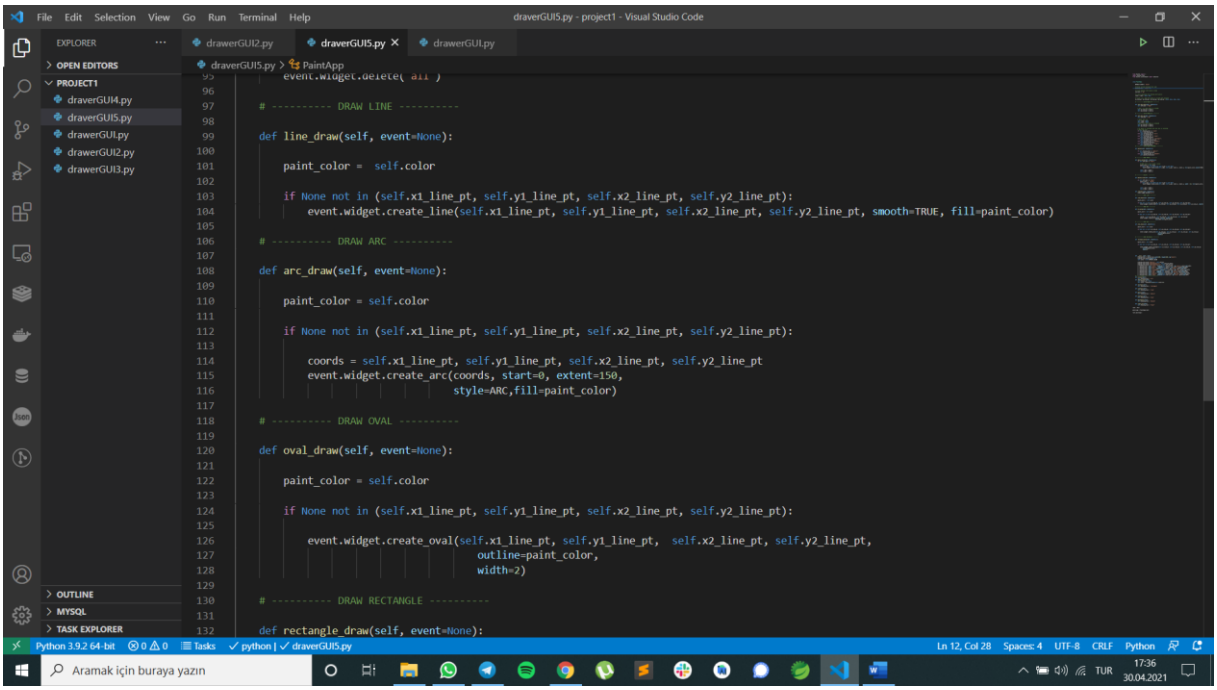
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event.widget.delete(all)
# ---------- DRAW LINE ----------
def line_draw(self, event=None):
paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
event.widget.create_line(self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt, smooth=TRUE, fill=paint_color)
# ---------- DRAW ARC ----------
def arc_draw(self, event=None):
paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
coords = self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt
event.widget.create_arc(coords, start=0, extent=150,
style=ARC,fill=paint_color)
# ---------- DRAW OVAL ----------
def oval_draw(self, event=None):
paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
event.widget.create_oval(self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt,
outline=paint_color,
width=2)
# ---------- DRAW RECTANGLE ----------
def rectangle_draw(self, event=None):
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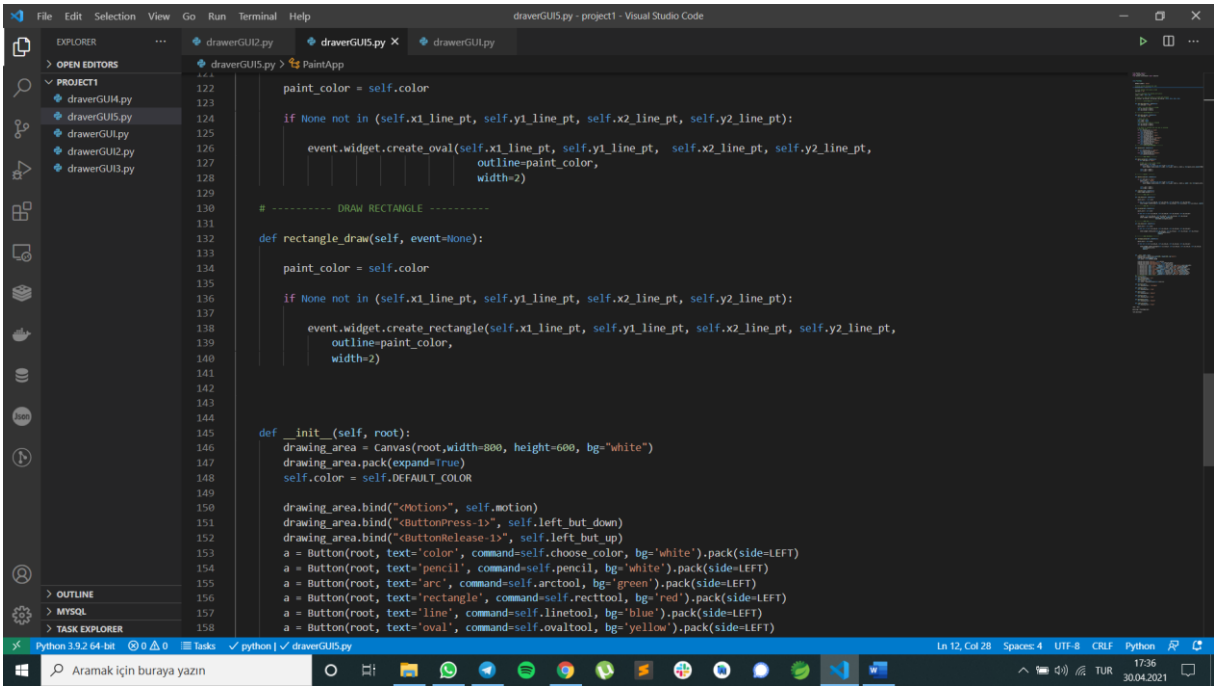
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paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
event.widget.create_oval(self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt,
outline=paint_color,
width=2)
# ---------- DRAW RECTANGLE ----------
def rectangle_draw(self, event=None):
paint_color = self.color
if None not in (self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt):
event.widget.create_rectangle(self.x1_line_pt, self.y1_line_pt, self.x2_line_pt, self.y2_line_pt,
outline=paint_color,
width=2)
def __init__(self, root):
drawing_area = Canvas(root,width=800, height=600, bg="white")
drawing_area.pack(expand=True)
self.color = self.DEFAULT_COLOR
drawing_area.bind("<Motion>", self.motion)
drawing_area.bind("<ButtonPress-1>", self.left_but_down)
drawing_area.bind("<ButtonRelease-1>", self.left_but_up)
a = Button(root, text='color', command=self.choose_color, bg='white').pack(side=LEFT)
a = Button(root, text='pencil', command=self.pencil, bg='white').pack(side=LEFT)
a = Button(root, text='arc', command=self.arctool, bg='green').pack(side=LEFT)
a = Button(root, text='rectangle', command=self.recttool, bg='red').pack(side=LEFT)
a = Button(root, text='line', command=self.linetool, bg='blue').pack(side=LEFT)
a = Button(root, text='oval', command=self.ovaltool, bg='yellow').pack(side=LEFT)
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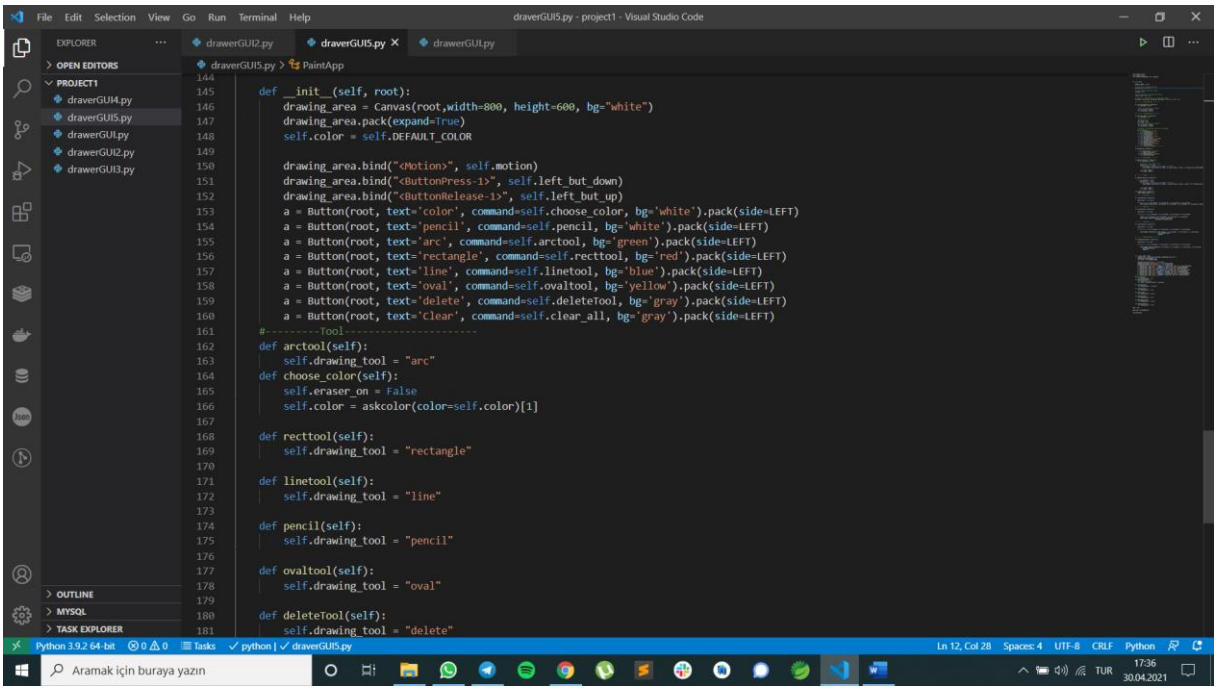
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a = Button(root, text='arc', command=self.arctool, bg='green').pack(side=LEFT)
a = Button(root, text='rectangle', command=self.recttool, bg='red').pack(side=LEFT)
a = Button(root, text='line', command=self.linetool, bg='blue').pack(side=LEFT)
a = Button(root, text='oval', command=self.ovaltool, bg='yellow').pack(side=LEFT)
a = Button(root, text='delete', command=self.deleteTool, bg='gray').pack(side=LEFT)
a = Button(root, text='Clear', command=self.clear_all, bg='gray').pack(side=LEFT)
#---------Tool----------------------
def arctool(self):
self.drawing_tool = "arc"
def choose_color(self):
self.eraser_on = False
self.color = askcolor(color=self.color)[1]
def recttool(self):
self.drawing_tool = "rectangle"
def linetool(self):
self.drawing_tool = "line"
def pencil(self):
self.drawing_tool = "pencil"
def ovaltool(self):
self.drawing_tool = "oval"
def deleteTool(self):
self.drawing_tool = "delete"
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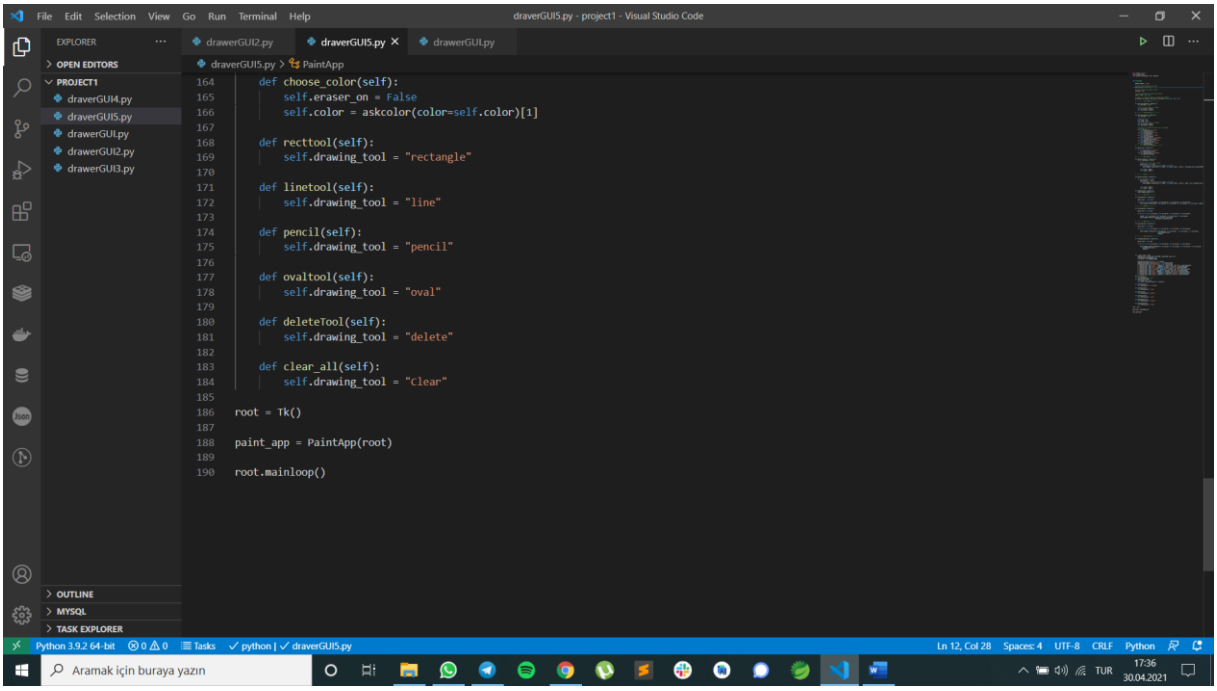
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self.color = askcolor(color=self.color)[1]
def recttool(self):
self.drawing_tool = "rectangle"
def linetool(self):
self.drawing_tool = "line"
def pencil(self):
self.drawing_tool = "pencil"
def ovaltool(self):
self.drawing_tool = "oval"
def deleteTool(self):
self.drawing_tool = "delete"
def clear_all(self):
self.drawing_tool = "Clear"
root = Tk()
paint_app = PaintApp(root)
root.mainloop()
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