

```
# import required modules
import turtle
import time
import random

delay = 0.1
score = 0
high_score = 0

# Creating a window screen
wn = turtle.Screen()
wn.title("Snake Game")
wn.bgcolor("blue")
# the width and height can be put as user's choice
wn.setup(width=600, height=600)
wn.tracer(0)

# head of the snake
head = turtle.Turtle()
head.shape("square")
head.color("white")
head.penup()
head.goto(0, 0)
head.direction = "Stop"

# food in the game
food = turtle.Turtle()
colors = random.choice(['red', 'green', 'black'])
shapes = random.choice(['square', 'triangle', 'circle'])
food.speed(0)
food.shape(shapes)
food.color(colors)
food.penup()
food.goto(0, 100)

pen = turtle.Turtle()
pen.speed(0)
pen.shape("square")
pen.color("white")
pen.penup()
pen.hideturtle()
pen.goto(0, 250)
```

```
pen.write("Score : 0 High Score : 0", align="center",  
         font=("candara", 24, "bold"))
```

```
# assigning key directions
```

```
def group():  
    if head.direction != "down":  
        head.direction = "up"
```

```
def godown():  
    if head.direction != "up":  
        head.direction = "down"
```

```
def goleft():  
    if head.direction != "right":  
        head.direction = "left"
```

```
def goright():  
    if head.direction != "left":  
        head.direction = "right"
```

```
def move():  
    if head.direction == "up":  
        y = head.ycor()  
        head.sety(y+20)  
    if head.direction == "down":  
        y = head.ycor()  
        head.sety(y-20)  
    if head.direction == "left":  
        x = head.xcor()  
        head.setx(x-20)  
    if head.direction == "right":  
        x = head.xcor()  
        head.setx(x+20)
```

```
wn.listen()  
wn.onkeypress(group, "w")
```

```
wn.onkeypress(godown, "s")
wn.onkeypress(goleft, "a")
wn.onkeypress(goright, "d")
```

```
segments = []
```

```
# Main Gameplay
```

```
while True:
```

```
    wn.update()
```

```
    if head.xcor() > 290 or head.xcor() < -290 or head.ycor() > 290 or head.ycor() < -290:
```

```
        time.sleep(1)
```

```
        head.goto(0, 0)
```

```
        head.direction = "Stop"
```

```
        colors = random.choice(['red', 'blue', 'green'])
```

```
        shapes = random.choice(['square', 'circle'])
```

```
        for segment in segments:
```

```
            segment.goto(1000, 1000)
```

```
        segments.clear()
```

```
        score = 0
```

```
        delay = 0.1
```

```
        pen.clear()
```

```
        pen.write("Score : {} High Score : {}".format(
```

```
            score, high_score), align="center", font=("candara", 24, "bold"))
```

```
    if head.distance(food) < 20:
```

```
        x = random.randint(-270, 270)
```

```
        y = random.randint(-270, 270)
```

```
        food.goto(x, y)
```

```
    # Adding segment
```

```
    new_segment = turtle.Turtle()
```

```
    new_segment.speed(0)
```

```
    new_segment.shape("square")
```

```
    new_segment.color("orange") # tail colour
```

```
    new_segment.penup()
```

```
    segments.append(new_segment)
```

```
    delay -= 0.001
```

```
    score += 10
```

```
    if score > high_score:
```

```
        high_score = score
```

```
    pen.clear()
```

```
    pen.write("Score : {} High Score : {}".format(
```

```
        score, high_score), align="center", font=("candara", 24, "bold"))
```

```

# Checking for head collisions with body segments
for index in range(len(segments)-1, 0, -1):
    x = segments[index-1].xcor()
    y = segments[index-1].ycor()
    segments[index].goto(x, y)
if len(segments) > 0:
    x = head.xcor()
    y = head.ycor()
    segments[0].goto(x, y)
move()
for segment in segments:
    if segment.distance(head) < 20:
        time.sleep(1)
        head.goto(0, 0)
        head.direction = "stop"
        colors = random.choice(['red', 'blue', 'green'])
        shapes = random.choice(['square', 'circle'])
        for segment in segments:
            segment.goto(1000, 1000)
        segment.clear()

        score = 0
        delay = 0.1
        pen.clear()
        pen.write("Score : {} High Score : {}".format(
            score, high_score), align="center", font=("candara", 24, "bold"))
time.sleep(delay)

wn.mainloop()

```

Score : 0 High Score : 0

