Importing Necessary Items

In [1]:
```
import cv2
import numpy as np
import matplotlib.pyplot as plt


import pickle
with open("currency_prediction_model_3.pkl", "rb") as f:
    currency_model = pickle.load(f)
```

```
.....vars
.........0
.........1
.........10
.........11
.........12
.........13
.........14
.........15
.........16
.........17
.........18
.........19
.........2
.........20
.........3
.........4
.........5
.........6
```

Assigning the values w.r.t to classes

In [2]:
```
cur_dict = {0:10,1:20,2:50,3:100,4:200,5:500,6:2000}
```

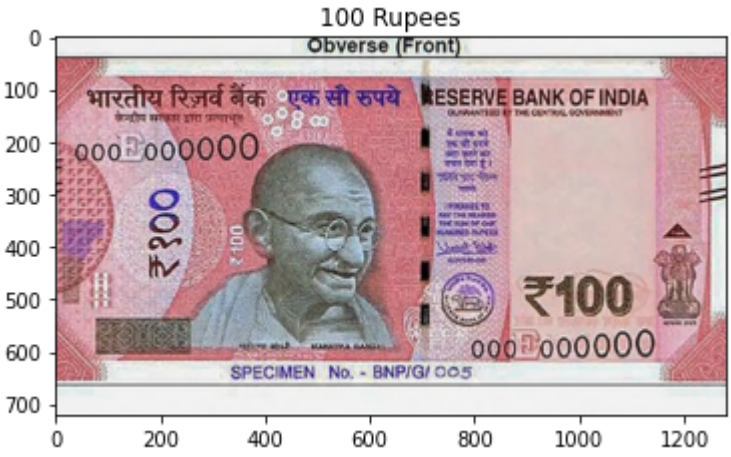
Get predicted amount from image

In [3]:
```
def amount_from_img(path):
    og = cv2.imread(path)
    p1 = cv2.resize(og,(300,300))
    p1 = p1/255
    p1 = np.array([p1])
    prediction = currency_model.predict(p1)
    digit = np.argmax(prediction)
    amount = cur_dict[digit]
    plt.imshow(og)
    plt.title(f"{amount} Rupees")
```

Samples

In [4]:
```
amount_from_img("C:/Users/Admin/Downloads/100.png")
```

```
1/1 [==============================] - 0s 129ms/step
```

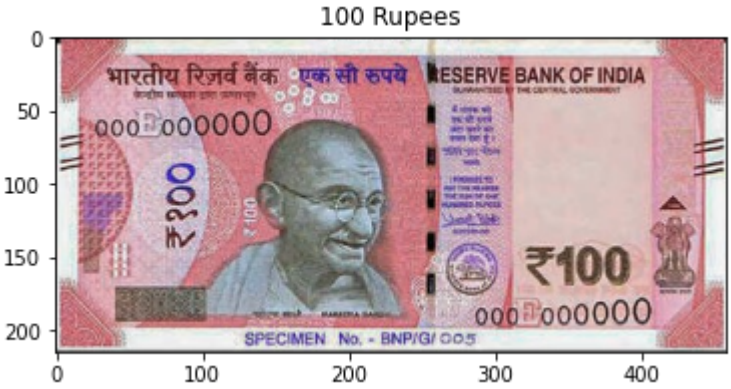


In [5]:
```
amount_from_img(r"D:\CV\Currency_Classification_Project\dataset\test\50__3
```

```
1/1 [==============================] - 0s 39ms/step
```

In [6]:
```
1 amount_from_img(r"D:\CV\Currency_Classification_Project\dataset\test\100_4
```

```
1/1 [==============================] - 0s 49ms/step
```



In [7]:
```
1 amount_from_img(r"C:\Users\Admin\Downloads\2000.jfif")
```

```
1/1 [==============================] - 0s 53ms/step
```

Get predicted amount from video

In [8]:

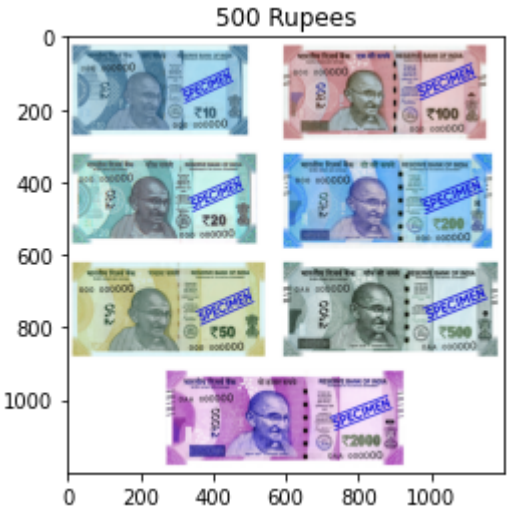
```
cap = cv2.VideoCapture(0)
while(cap.isOpened()):

    ret, og_frame = cap.read()

    # changing size of an image same as required for an input image
    frame = cv2.resize(og_frame, (300,300))

    # Scalling
    frame = frame/255

    # Convert the image to a NumPy array.
    image = np.array([frame])


    prediction = currency_model.predict([image])

    digit = np.argmax(prediction)
    digit = cur_dict[digit]
    cv2.putText(og_frame, str(digit), (30, 30), cv2.FONT_HERSHEY_SIMPLEX,

    cv2.imshow('frame',og_frame)

    if cv2.waitKey(1) & 0xFF == ord('q'):
        break


cap.release()
cv2.destroyAllWindows()
```

```
1/1 [==============================] - 0s 83ms/step
1/1 [==============================] - 0s 52ms/step
1/1 [==============================] - 0s 49ms/step
1/1 [==============================] - 0s 43ms/step
1/1 [==============================] - 0s 46ms/step
1/1 [==============================] - 0s 44ms/step
1/1 [==============================] - 0s 42ms/step
1/1 [==============================] - 0s 45ms/step
1/1 [==============================] - 0s 50ms/step
1/1 [==============================] - 0s 47ms/step
1/1 [==============================] - 0s 44ms/step
1/1 [==============================] - 0s 43ms/step
1/1 [==============================] - 0s 44ms/step
1/1 [==============================] - 0s 51ms/step
1/1 [==============================] - 0s 42ms/step
1/1 [==============================] - 0s 46ms/step
1/1 [==============================] - 0s 42ms/step
1/1 [==============================] - 0s 44ms/step
1/1 [==============================] - 0s 41ms/step
1/1 [==============================] - 0s 42ms/step
1/1 [==============================] - 0s 44ms/step
1/1 [==============================] - 0s 41ms/step
1/1 [==============================] - 0s 42ms/step
1/1 [==============================] - 0s 41ms/step
1/1 [==============================] - 0s 46ms/step
```

Error

In [9]:
```
1 amount_from_img(r"C:\Users\Admin\Downloads\Banknote_of_india.png")
```

```
1/1 [==============================] - 0s 44ms/step
```



In [ ]:
```
1
```