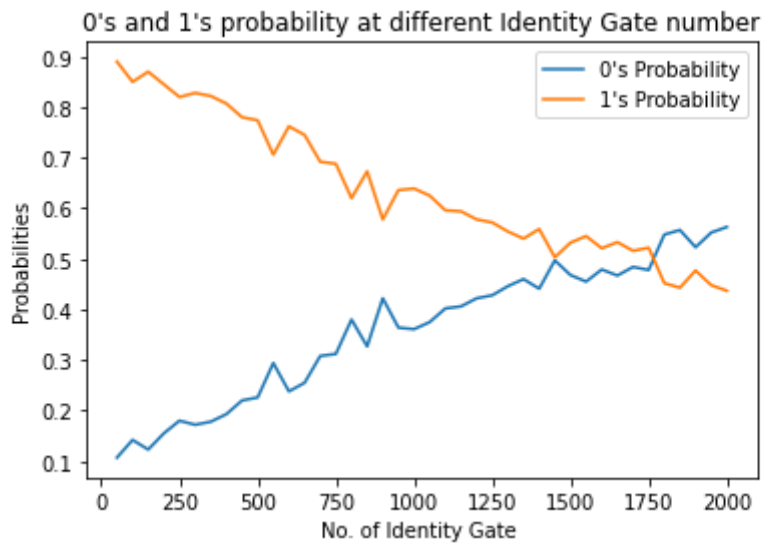


## | 1> Flip to | 0> at 1750 Identity Gate



```
import matplotlib.pyplot as plt

# line 1 for zero probability points
y1 = [0.107,0.142,0.123,0.155,0.180,0.172,0.178,0.193,0.220,0.226,0.294,0.238,0.

x1 = [50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950

# plotting the line 1 points
plt.plot(x1, y1, label = "0's Probability")

# line 2 points
y2 = [0.89,0.85,0.87,0.845,0.820,0.828,0.822,0.807,0.780,0.774,0.706,0.762,0.745

x2 = [50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950

# plotting the line 2 points
plt.plot(x2, y2, label = "1's Probability")

# naming the x axis
plt.xlabel('No. of Identity Gate ')
# naming the y axis
plt.ylabel('Probabilities')
# giving a title to my graph
plt.title("0's and 1's probability at different Identity Gate number")

# show a legend on the plot
plt.legend()

# function to show the plot
plt.show()
```

## **$|1\rangle$ 's Probability calculated in Real Quantum Device "ibmq\_armonk" From Range 50 to 2000 identity gate**

Code Details and image are in this Drive :

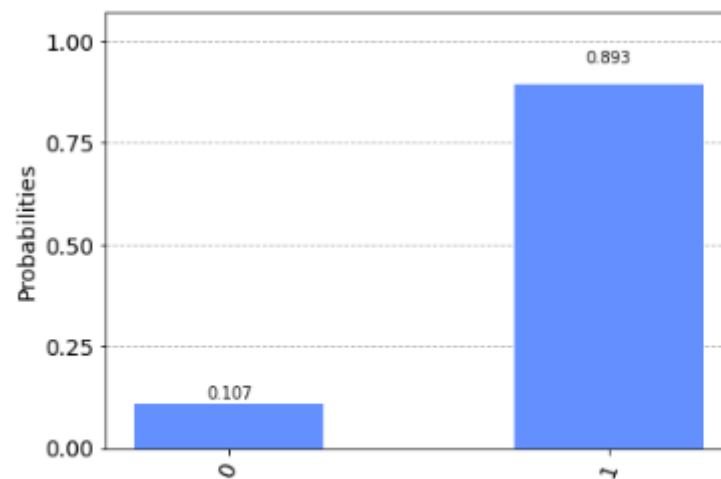
<https://drive.google.com/drive/folders/1naKQ7ede9KeUUjnG6f5MzUVYLAOlftL?usp=sharing>

Enter the length of Identity Gate Between Quantum Channel: 50

ibmqfactory.load\_account:WARNING:2021-07-11 09:14:19,724: Credentials will be replaced.

60eab66e2d87affd418c07fc

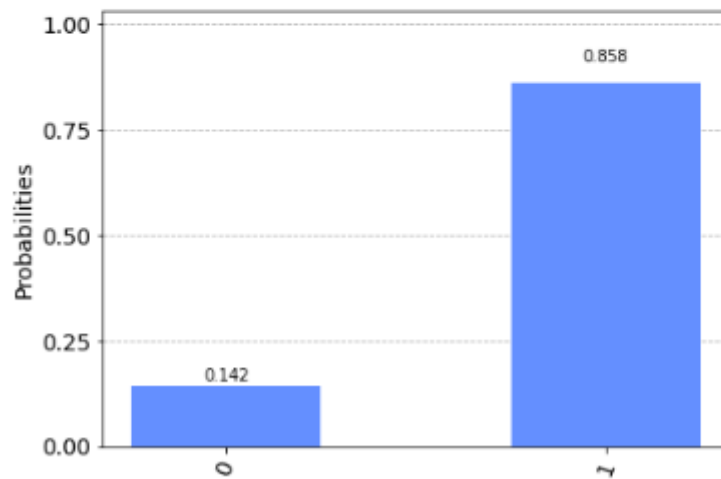
Job Status: job has successfully run



Enter the length of Identity Gate Between Quantum Channel: 100

ibmqfactory.load\_account:WARNING:2021-07-11 09:13:53,336: Credent  
will be replaced.

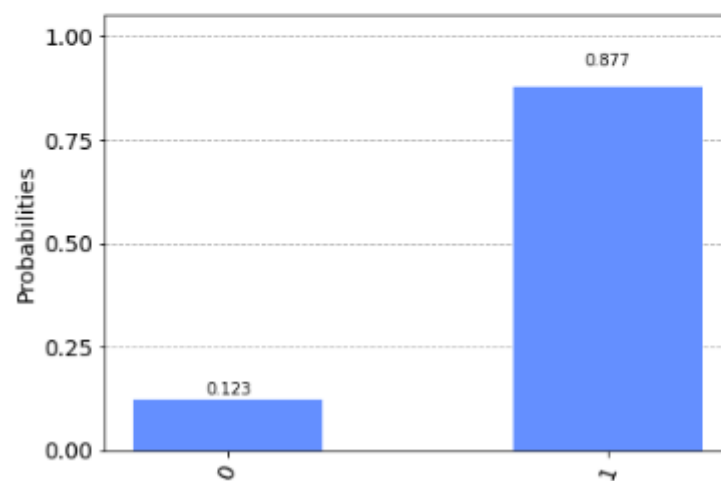
60eab65447d390f34e8f93e3  
Job Status: job has successfully run



Enter the length of Identity Gate Between Quantum Channel: 150

ibmqfactory.load\_account:WARNING:2021-07-11 09:12:49,498: Credentials  
will be replaced.

60eab614f546790a4151f442  
Job Status: job has successfully run

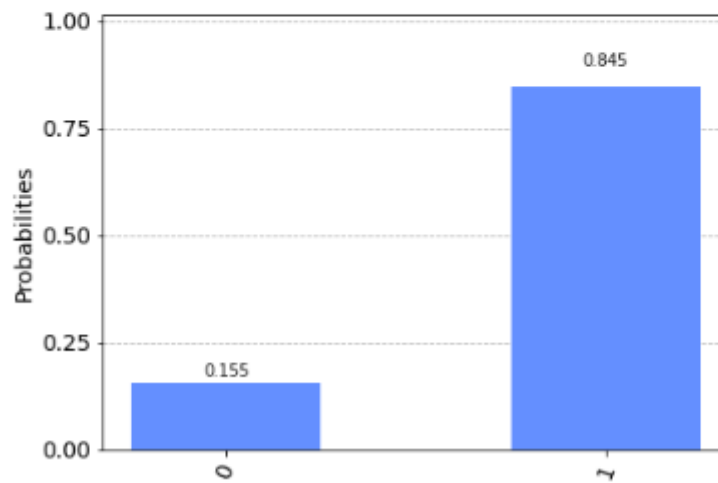


Enter the length of Identity Gate Between Quantum Channel: 200

ibmqfactory.load\_account:WARNING:2021-07-11 09:11:47,231: Credential will be replaced.

60eab5d5d36005299c492649

Job Status: job has successfully run

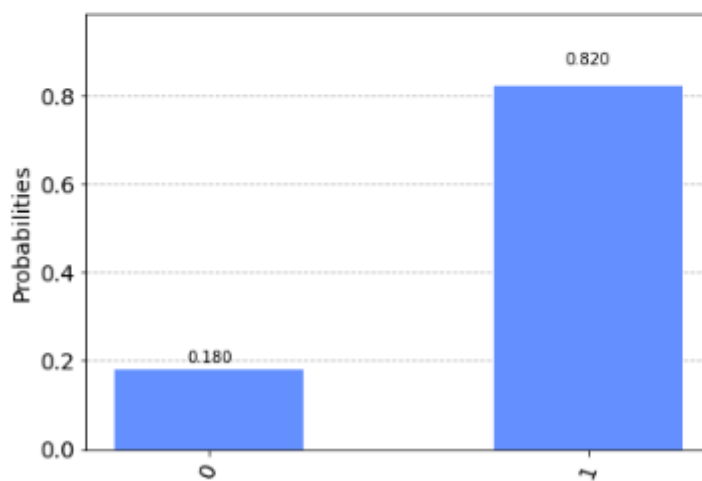


Enter the length of Identity Gate Between Quantum Channel: 250

ibmqfactory.load\_account:WARNING:2021-07-11 09:11:24,139: Credential will be replaced.

60eab5be2d87af33338c07f2

Job Status: job has successfully run

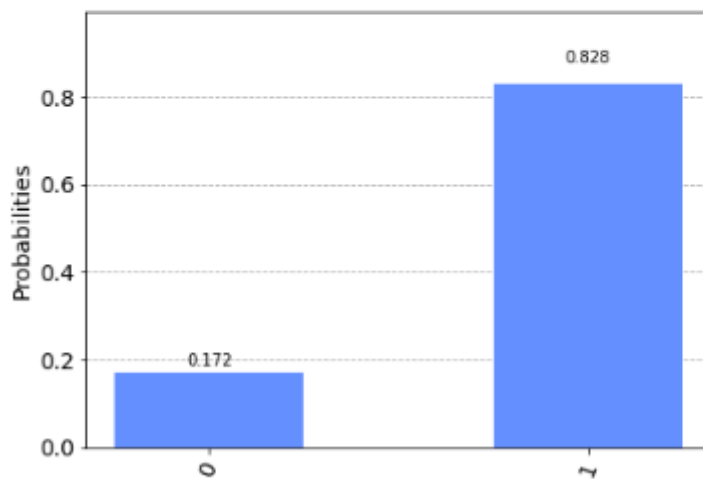


Enter the length of Identity Gate Between Quantum Channel: 300

ibmqfactory.load\_account:WARNING:2021-07-11 09:09:56,407: Credentials will be replaced.

60eab5665ce0a262ae5911df

Job Status: job has successfully run

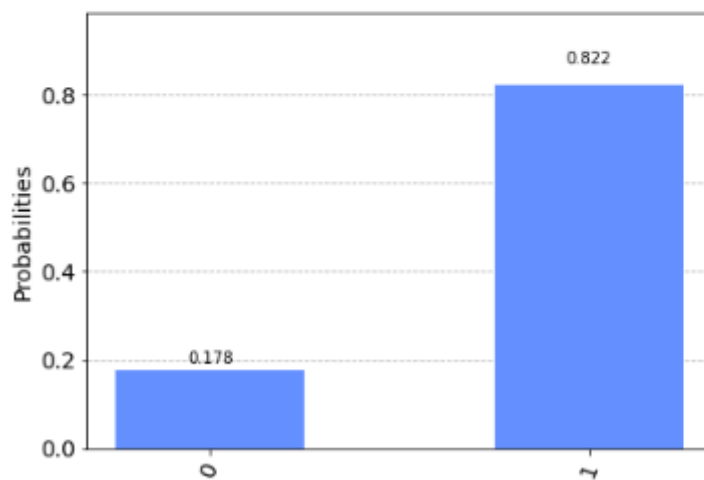


Enter the length of Identity Gate Between Quantum Channel: 350

ibmqfactory.load\_account:WARNING:2021-07-11 08:19:14,758: Credentials a will be replaced.

60eaa985f54679286e51f3ca

Job Status: job has successfully run

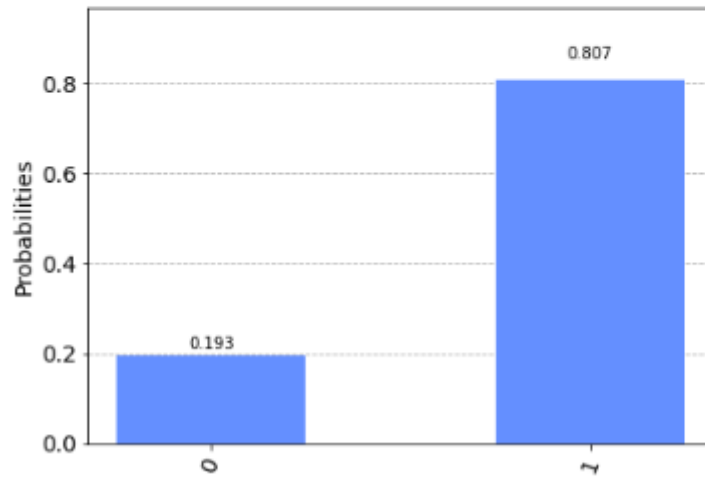


Enter the length of Identity Gate Between Quantum Channel: 400

ibmqfactory.load\_account:WARNING:2021-07-11 08:19:48,851: Credentials will be replaced.

60eaa9a76fd08405d2b9e520

Job Status: job has successfully run

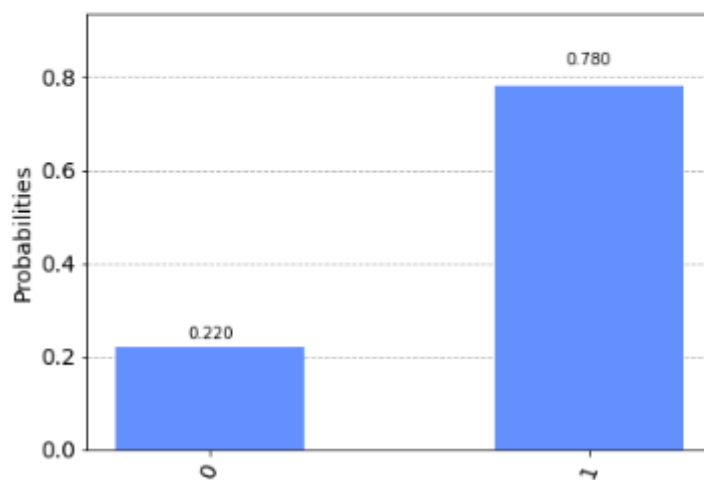


Enter the length of Identity Gate Between Quantum Channel: 450

ibmqfactory.load\_account:WARNING:2021-07-11 08:20:53,454: Credentials are al will be replaced.

60eaa9e8ff9fd5ef8234bd29

Job Status: job has successfully run

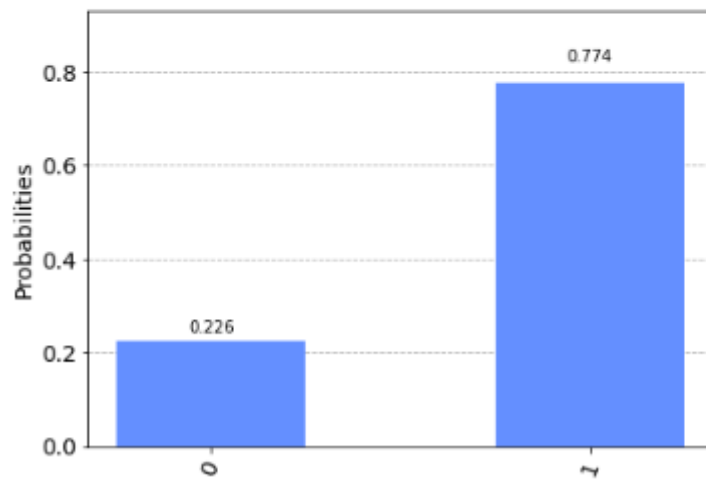


Enter the length of Identity Gate Between Quantum Channel: 500

ibmqfactory.load\_account:WARNING:2021-07-11 08:21:58,104: Credentials are already  
will be replaced.

60eaaa296fd0847f78b9e527

Job Status: job has successfully run

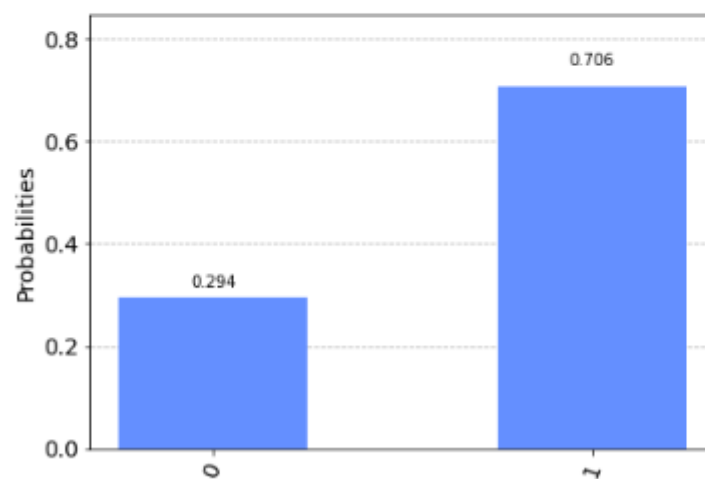


Enter the length of Identity Gate Between Quantum Channel: 550

ibmqfactory.load\_account:WARNING:2021-07-11 08:22:38,290: Credentials  
will be replaced.

60eaaa51f5467915eb51f3d4

Job Status: job has successfully run

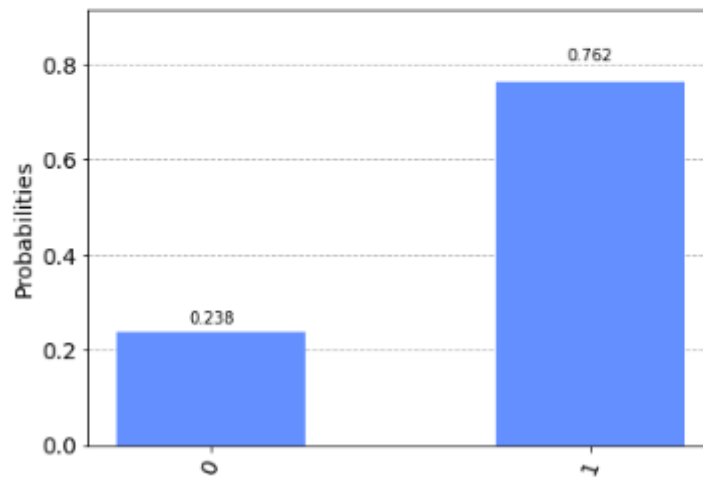


Enter the length of Identity Gate Between Quantum Channel: 600

ibmqfactory.load\_account:WARNING:2021-07-11 08:24:37,685: Credential will be replaced.

60eaaac847d39000a98f9365

Job Status: job has successfully run

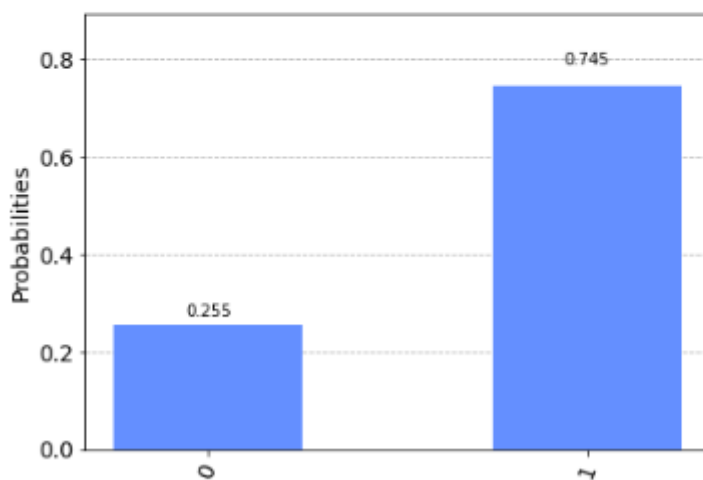


Enter the length of Identity Gate Between Quantum Channel: 650

ibmqfactory.load\_account:WARNING:2021-07-11 08:25:07,894: Credential will be replaced.

60eaaae63084df5bac0426ce

Job Status: job has successfully run



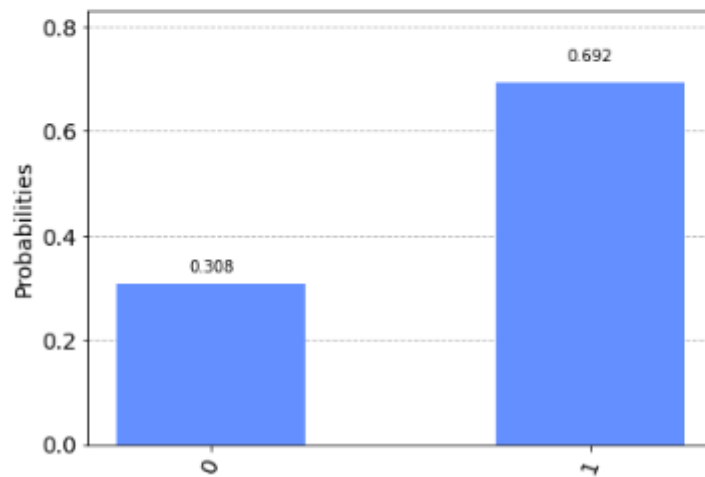


Enter the length of Identity Gate Between Quantum Channel: 700

ibmqfactory.load\_account:WARNING:2021-07-11 08:25:46,268: Credentials will be replaced.

60eaab0c5ce0a2c5f559117b

Job Status: job has successfully run

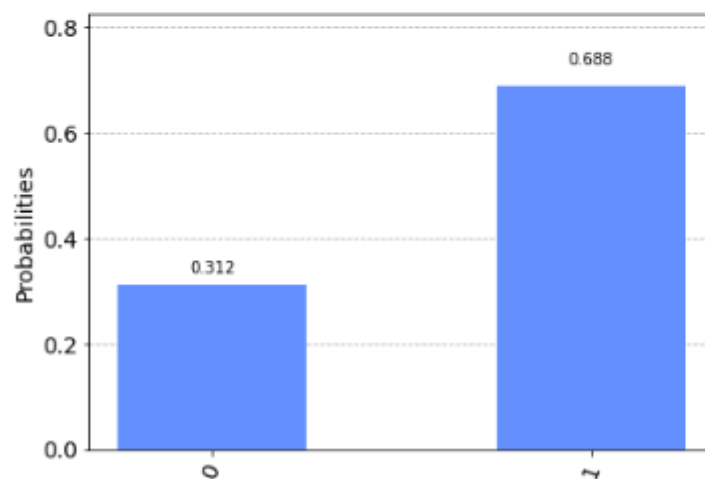


Enter the length of Identity Gate Between Quantum Channel: 750

ibmqfactory.load\_account:WARNING:2021-07-11 08:26:16,825: Credentials will be replaced.

60eaab2b7cbbde06f03eba85

Job Status: job has successfully run

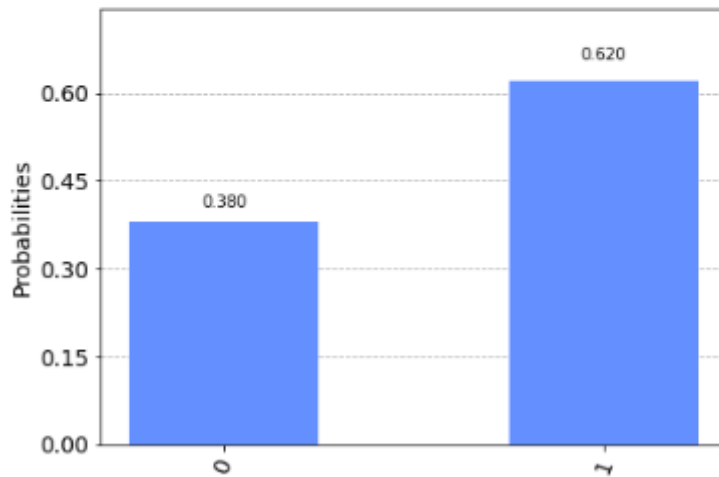


Enter the length of Identity Gate Between Quantum Channel: 800

ibmqfactory.load\_account:WARNING:2021-07-11 08:27:23,722: Credentials will be replaced.

60eaab6e47d39029ff8f936f

Job Status: job has successfully run

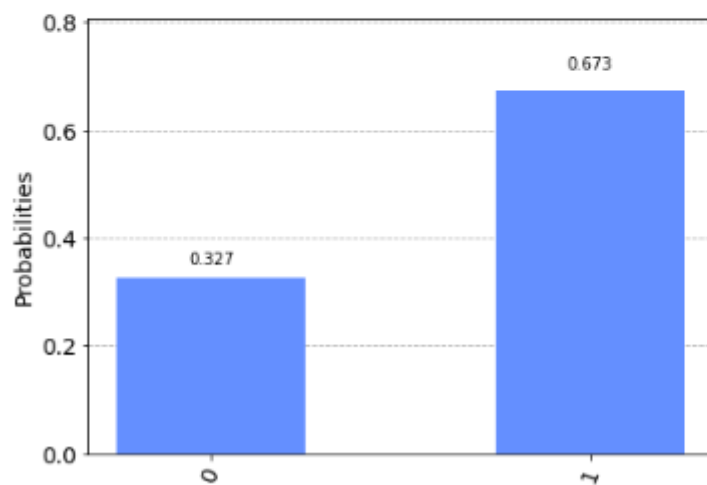


Enter the length of Identity Gate Between Quantum Channel: 850

ibmqfactory.load\_account:WARNING:2021-07-11 08:28:23,671: Credentials will be replaced.

60eaabaa2d87afe8ca8c0787

Job Status: job has successfully run

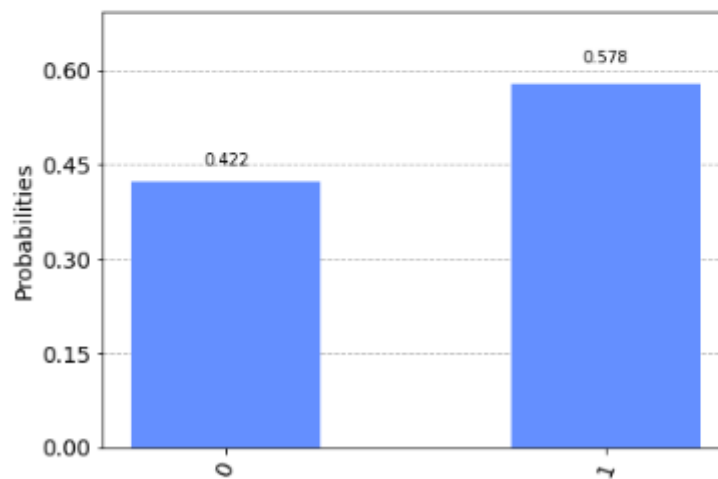


Enter the length of Identity Gate Between Quantum Channel: 900

ibmqfactory.load\_account:WARNING:2021-07-11 08:29:12,562: Credentials a  
will be replaced.

60eaabdb2d87af5ada8c078d

Job Status: job has successfully run

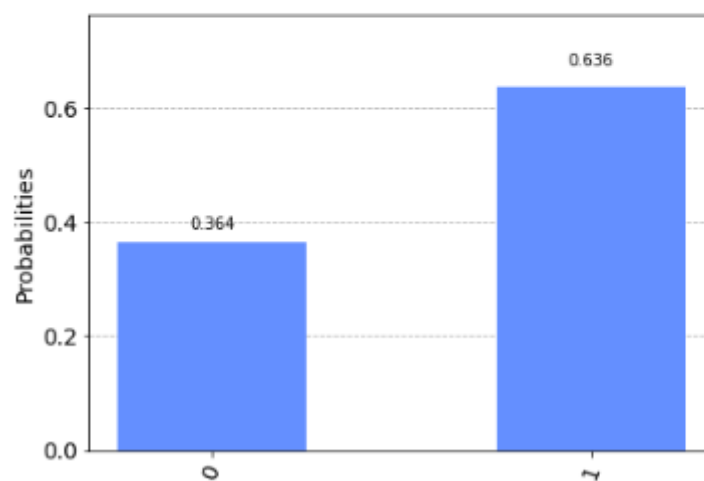


Enter the length of Identity Gate Between Quantum Channel: 950

ibmqfactory.load\_account:WARNING:2021-07-11 08:29:46,136: Credentia  
will be replaced.

60eaabfc6fd0842c42b9e53b

Job Status: job has successfully run

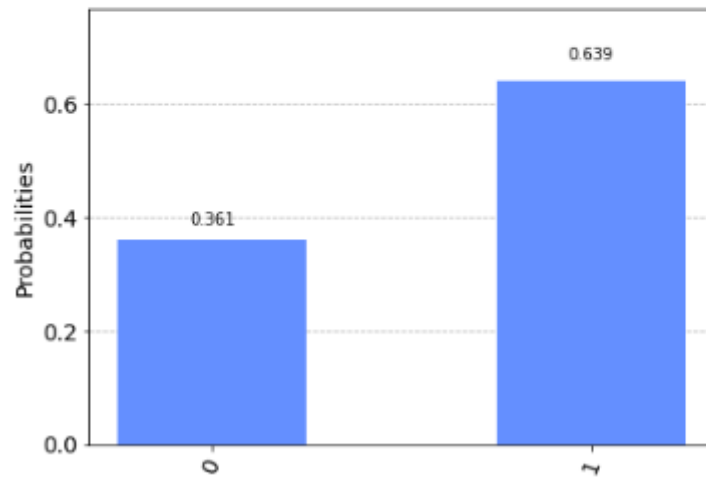


Enter the length of Identity Gate Between Quantum Channel: 1000

ibmqfactory.load\_account:WARNING:2021-07-11 08:30:40,978: Credentials will be replaced.

60eaac3447d3903fee8f937a

Job Status: job has successfully run

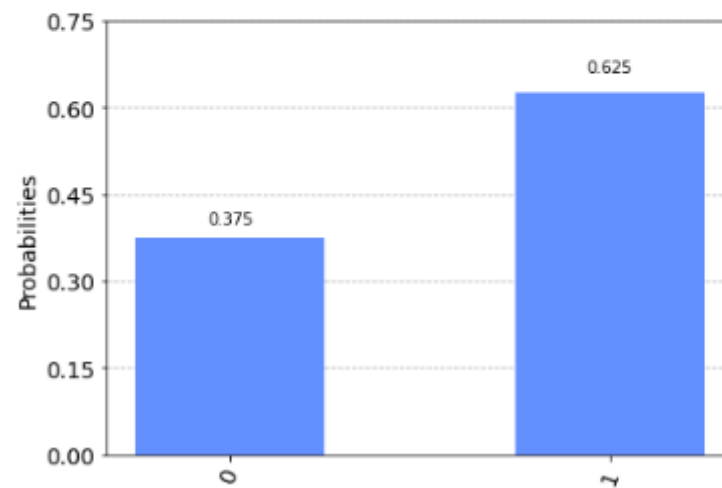


Enter the length of Identity Gate Between Quantum Channel: 1050

ibmqfactory.load\_account:WARNING:2021-07-11 08:31:12,638: Credentials will be replaced.

60eaac53957629b3b96b6ec4

Job Status: job has successfully run

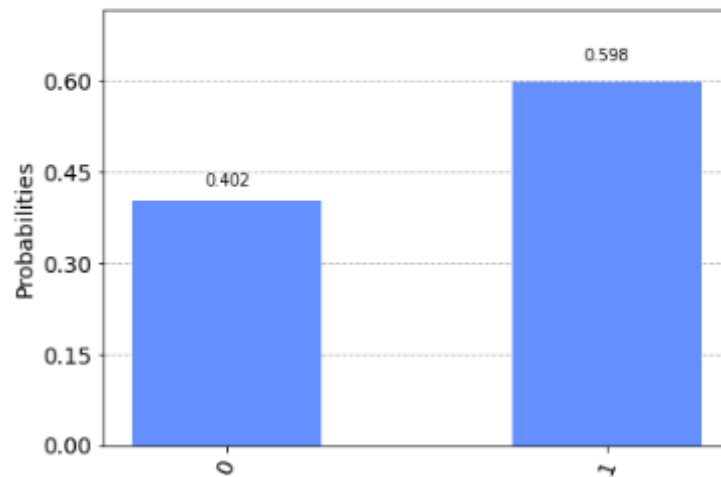


Enter the length of Identity Gate Between Quantum Channel: 1100

ibmqfactory.load\_account:WARNING:2021-07-11 08:34:30,865: Credential will be replaced.

60eaad192d87af63cc8c079b

Job Status: job has successfully run

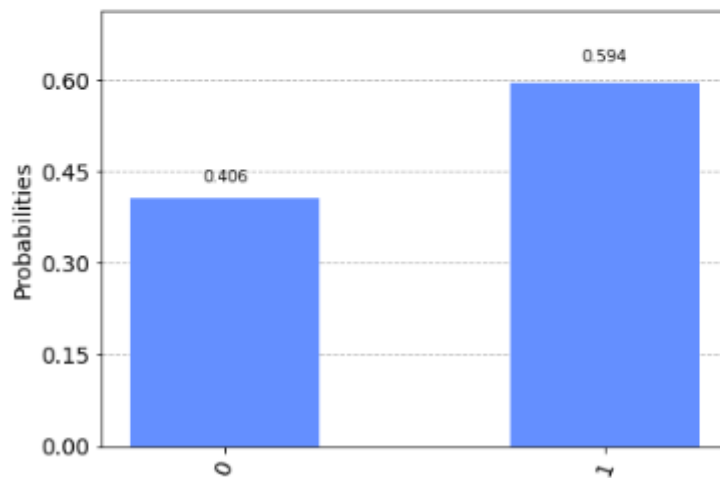


Enter the length of Identity Gate Between Quantum Channel: 1150

ibmqfactory.load\_account:WARNING:2021-07-11 08:35:14,683: Credentials will be replaced.

60eaad453084dfd0dd0426e9

Job Status: job has successfully run

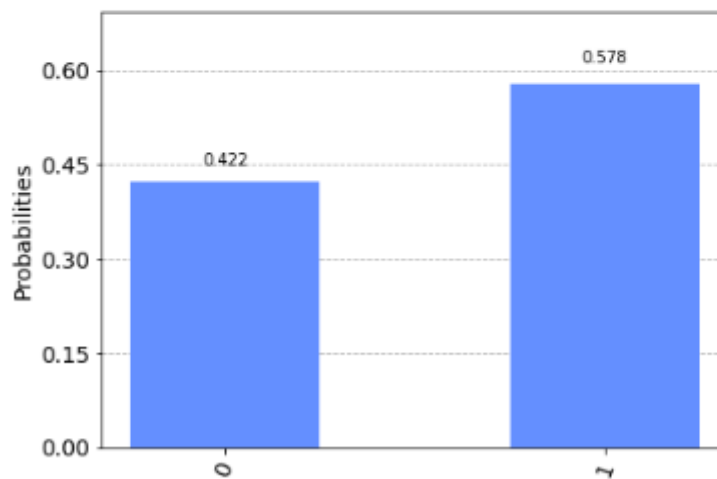


Enter the length of Identity Gate Between Quantum Channel: 1200

ibmqfactory.load\_account:WARNING:2021-07-11 08:35:54,970: Credentials will be replaced.

60eaad6d7cbbde3b9a3eba9e

Job Status: job has successfully run

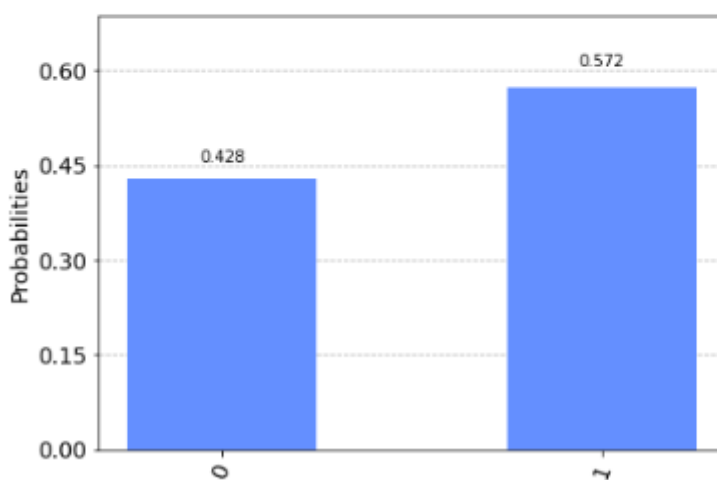


Enter the length of Identity Gate Between Quantum Channel: 1250

ibmqfactory.load\_account:WARNING:2021-07-11 08:37:20,968: Credentials will be replaced.

60eaadc4d3600557164925fa

Job Status: job has successfully run

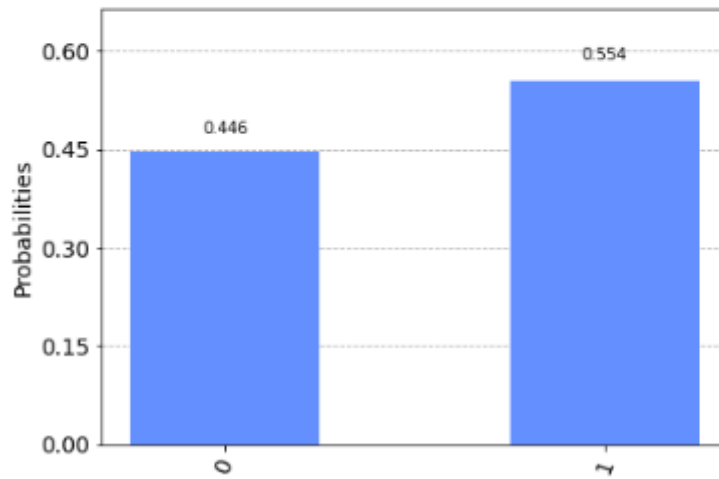


Enter the length of Identity Gate Between Quantum Channel: 1300

ibmqfactory.load\_account:WARNING:2021-07-11 08:38:27,094: Credentials will be replaced.

60eaae066fd0845070b9e54d

Job Status: job has successfully run

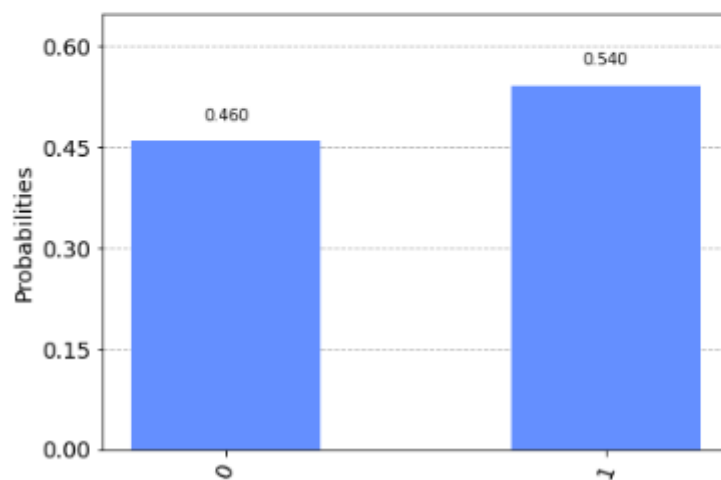


Enter the length of Identity Gate Between Quantum Channel: 1350

ibmqfactory.load\_account:WARNING:2021-07-11 08:47:29,667: Credential will be replaced.

60eab0245ce0a2f45e5911ac

Job Status: job has successfully run

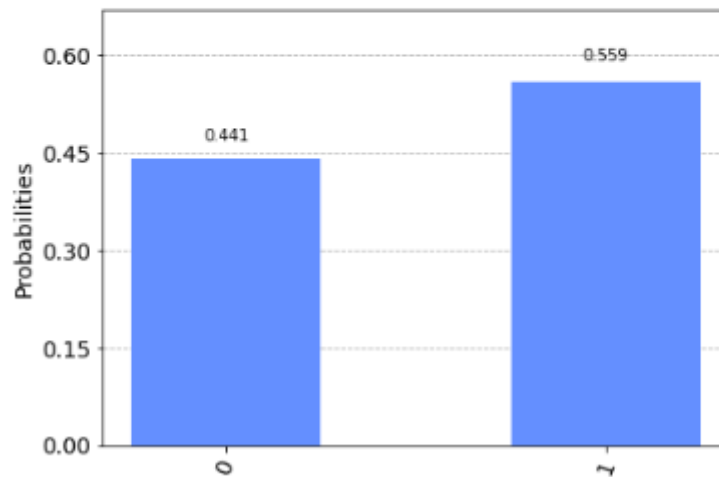


Enter the length of Identity Gate Between Quantum Channel: 1400

ibmqfactory.load\_account:WARNING:2021-07-11 08:48:00,901: Credentials will be replaced.

60eab0437cbbde3a503ebac2

Job Status: job has successfully run

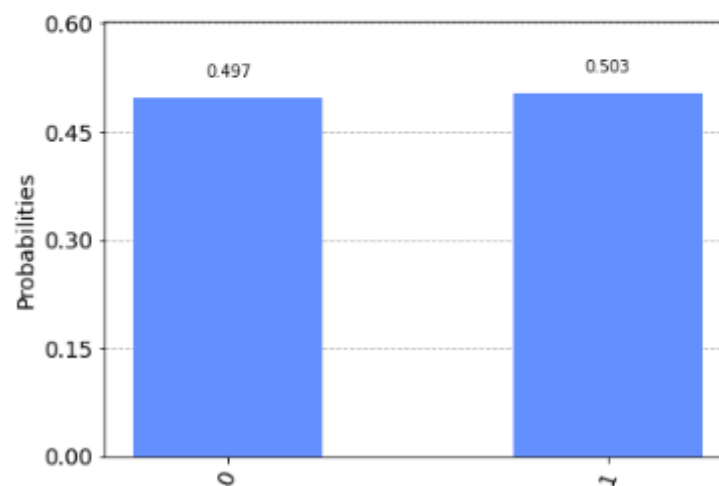


Enter the length of Identity Gate Between Quantum Channel: 1450

ibmqfactory.load\_account:WARNING:2021-07-11 08:49:01,418: Credentials will be replaced.

60eab0803084df5419042708

Job Status: job has successfully run



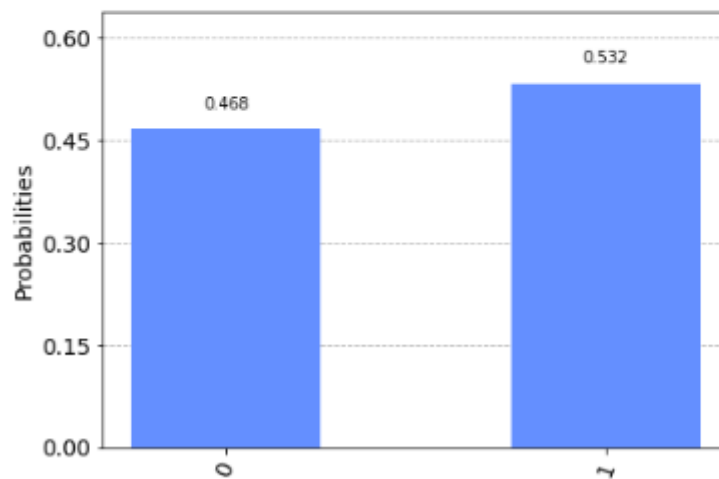


Enter the length of Identity Gate Between Quantum Channel: 1500

ibmqfactory.load\_account:WARNING:2021-07-11 08:49:36,173: Credentials will be replaced.

60eab0a3f54679a01d51f413

Job Status: job has successfully run

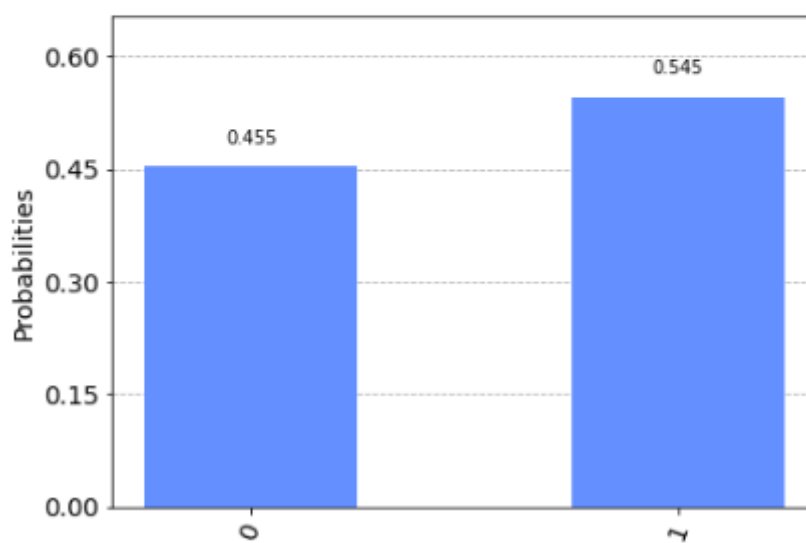


Enter the length of Identity Gate Between Quantum Channel: 1550

ibmqfactory.load\_account:WARNING:2021-07-11 08:50:24,088: Credentials will be replaced.

60eab0d247d3901cfa8f93ac

Job Status: job has successfully run

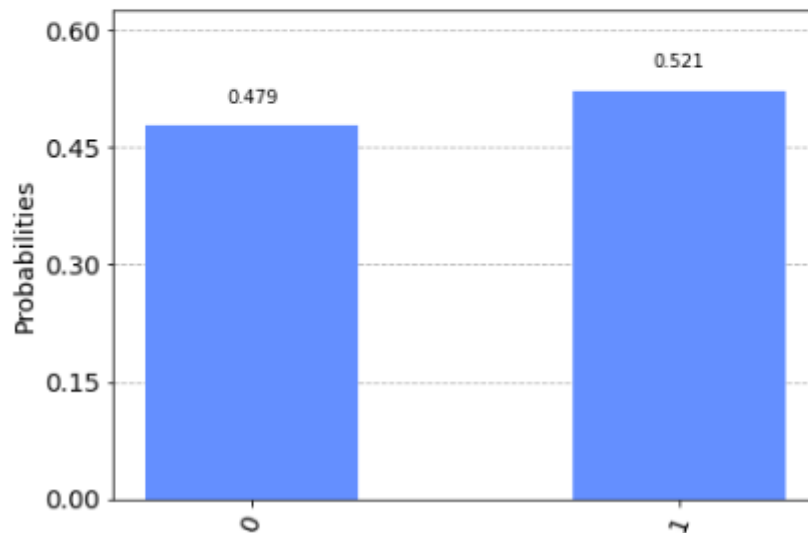


Enter the length of Identity Gate Between Quantum Channel: 1600

ibmqfactory.load\_account:WARNING:2021-07-11 08:50:53,884: Credential will be replaced.

60eab0f0f546797f4f51f416

Job Status: job has successfully run

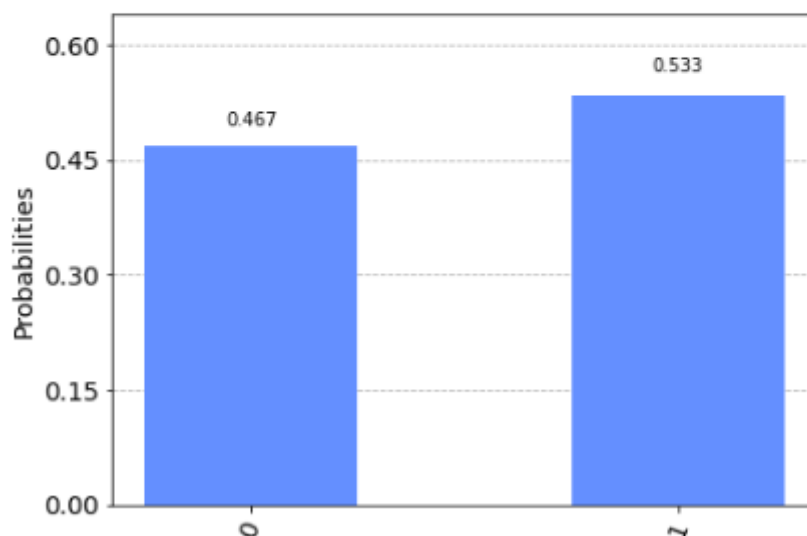


Enter the length of Identity Gate Between Quantum Channel: 1650

ibmqfactory.load\_account:WARNING:2021-07-11 08:51:23,824: Credential will be replaced.

60eab10e2d87af079e8c07c6

Job Status: job has successfully run

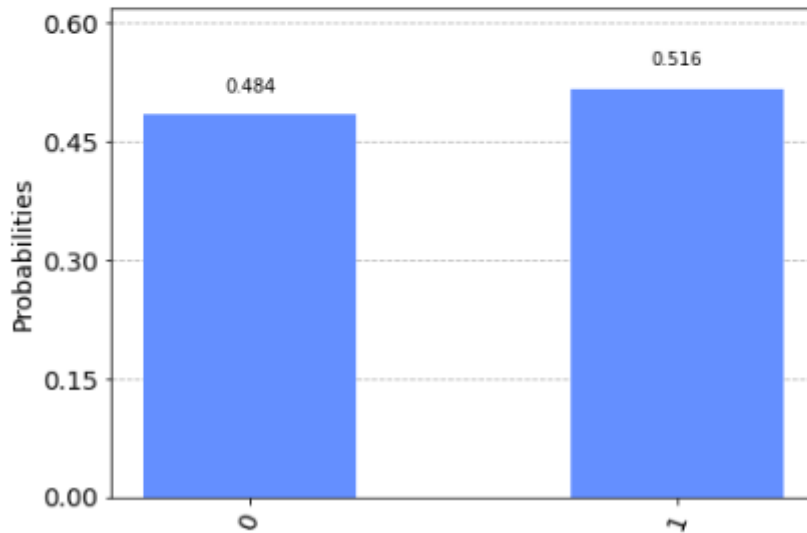


Enter the length of Identity Gate Between Quantum Channel: 1700

ibmqfactory.load\_account:WARNING:2021-07-11 08:52:12,273: Credentia  
will be replaced.

60eab13ff546798ae851f419

Job Status: job has successfully run

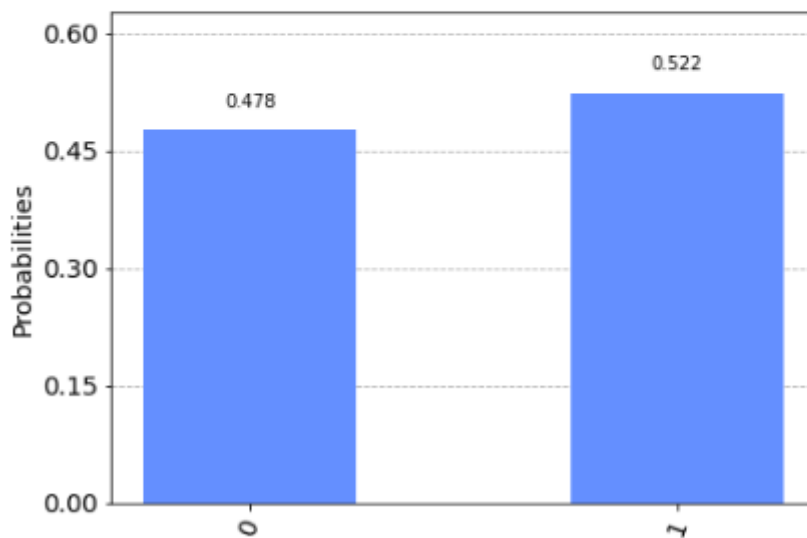


Enter the length of Identity Gate Between Quantum Channel: 1750

ibmqfactory.load\_account:WARNING:2021-07-11 08:53:11,289: Creden  
will be replaced.

60eab17ad360052783492624

Job Status: job has successfully run

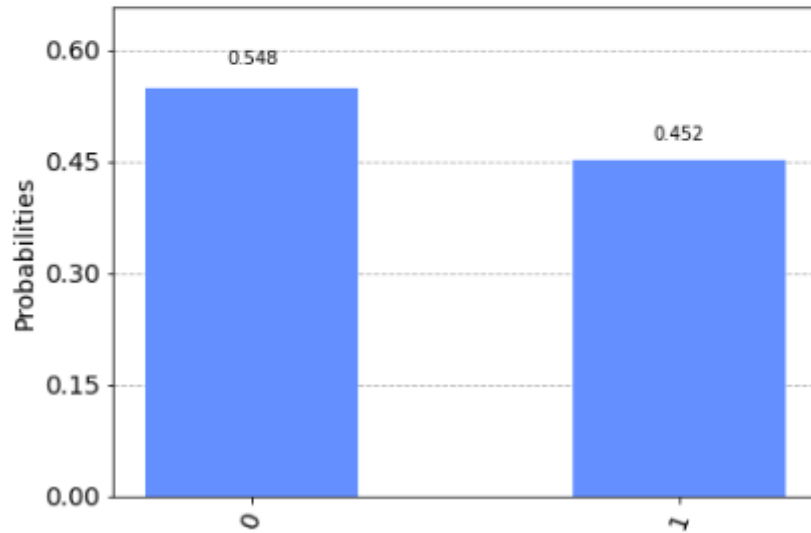


Enter the length of Identity Gate Between Quantum Channel: 1800

ibmqfactory.load\_account:WARNING:2021-07-11 08:53:36,246: Credential will be replaced.

60eab193957629467d6b6eed

Job Status: job has successfully run

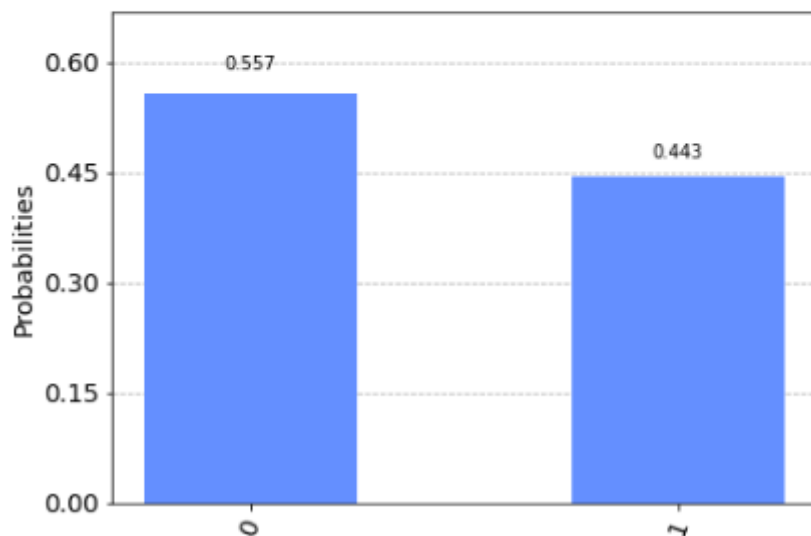


Enter the length of Identity Gate Between Quantum Channel: 1850

ibmqfactory.load\_account:WARNING:2021-07-11 08:54:20,252: Credential will be replaced.

60eab1be2d87afe4508c07ce

Job Status: job has successfully run

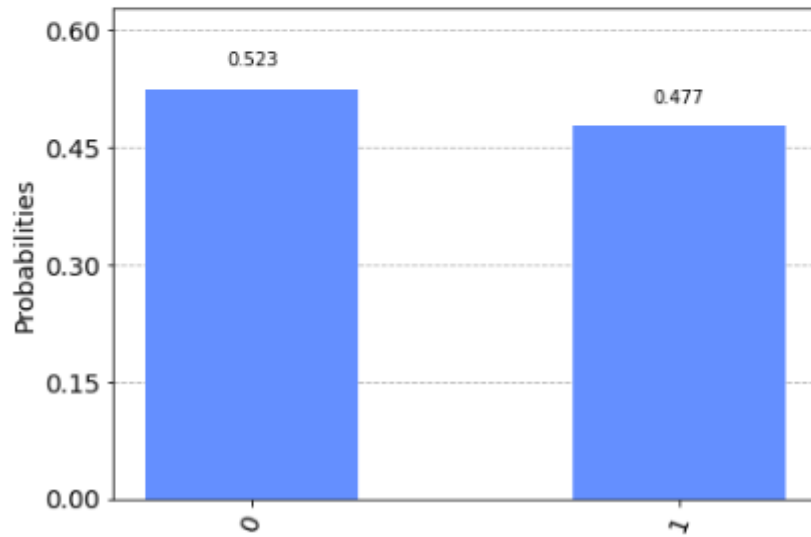


Enter the length of Identity Gate Between Quantum Channel: 1900

ibmqfactory.load\_account:WARNING:2021-07-11 08:55:17,282: Credentia  
will be replaced.

60eab1f83084df5578042714

Job Status: job has successfully run

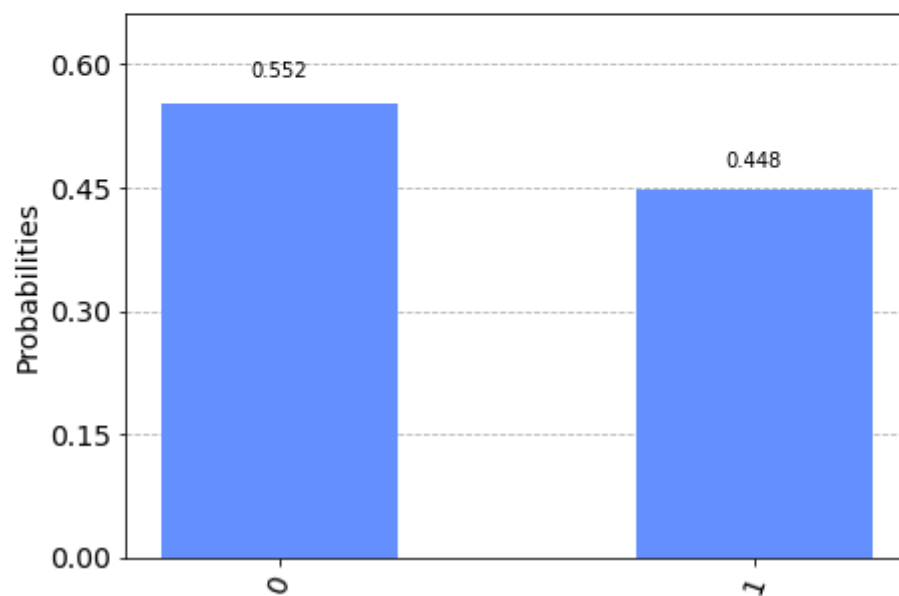


Enter the length of Identity Gate Between Quantum Channel: 1950

ibmqfactory.load\_account:WARNING:2021-07-11 08:55:55,563: Credential will be replaced.

60eab21eff9fd567ec34bd82

Job Status: job has successfully run



Enter the length of Identity Gate Between Quantum Channel: 2000

ibmqfactory.load\_account:WARNING:2021-07-11 08:56:26,708: Credentials are all  
ill be replaced.

60eab23d5ce0a245f35911c2

Job Status: job has successfully run

