newwaa

Q1.(1)

```
import numpy as np
import matplotlib.pyplot as plt
mean=0
std_dev=1
num_samples=1000
r_num=np.random.normal(mean,std_dev,num_samples)
rounded_num=np.round(r_num).astype(int)
unique_values, frequencies=np.unique(rounded_num, return_counts=True)
print(“Values|Frequencies”)
for value,frequency in zip(unique_values, frequencies):
  print(f“{value:>5}|{frequency:>9}“)
plt.bar(unique_values, frequencies, color=‘red’, edgecolor=‘blue’)
plt.title(“Frequency Distribution”)
plt.xlabel(“Values”)
plt.ylabel(“Frequencies”)
plt.grid(axis=‘y’, linestyle=‘–‘, alpha=0.7)
plt.show()
```

Q1(2)

```
odd=[]
even=[]
range_first=int(input(“Enter the first number:”))
range_last=int(input(“Enter the last number:”))
Range=range(range_first, range_last+1)
for i in Range:
  if i%2==0:
    even.append(i)
  else:
    odd.append(i)
def is_prime(num):
  if num<2:
    return False
  for n in range(2,int(num**0.5)+1):
    if num%n==0:
      return False
  return True
prime_odd_20=[]
for i in odd:
  if is_prime(i):
    prime_odd_20.append(i)
  if len(prime_odd_20)==20:
    break
print(“The first 20 prime odd number are:”, prime_odd_20)
```

Q1(3)

```
import pandas as pd

# Function to read a CSV file using pandas
def read_csv_with_pandas(file_path):
    try:
        data = pd.read_csv(file_path)
```