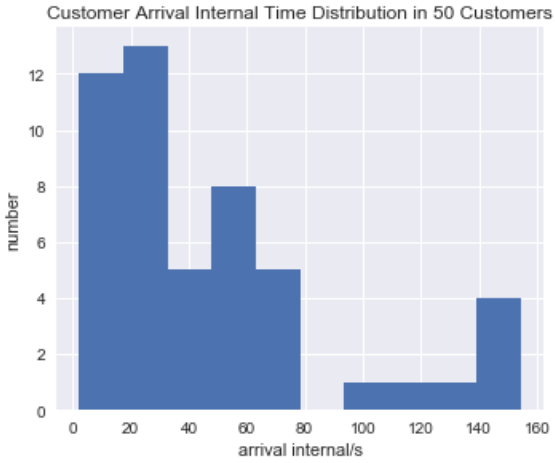
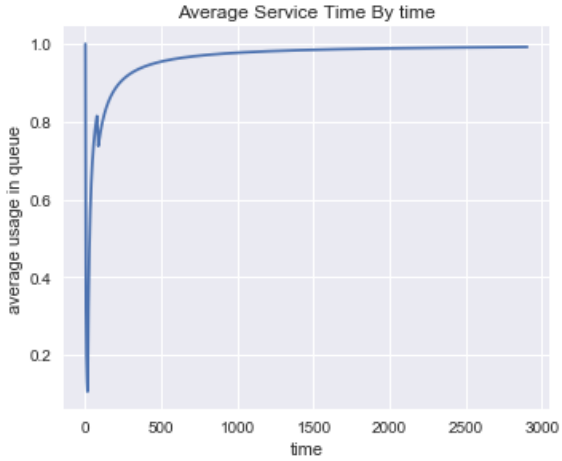
In [1]:
```
from main.preprocess import *
```

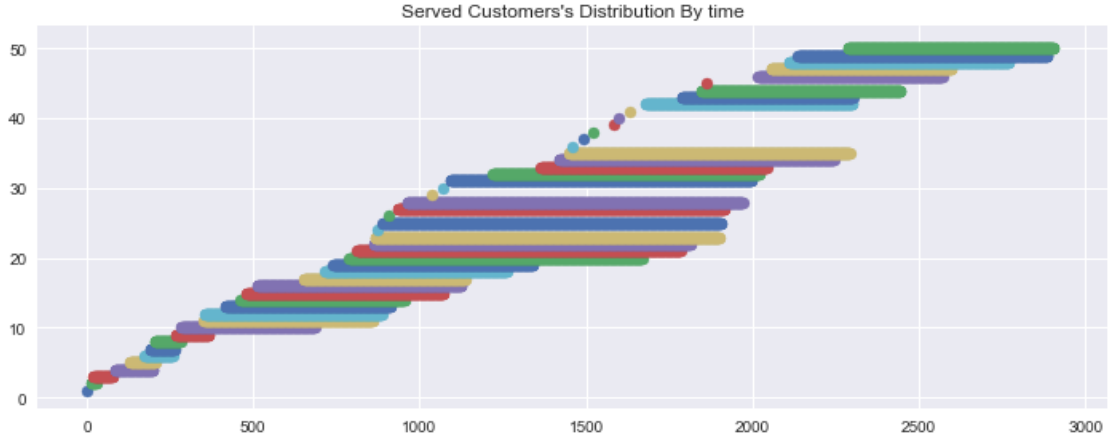
In [2]:
```
a = Global()
```

In [13]:
```
# mean_arrive=50.0, mean_serve=70.0, num_custom=20, max_queue=5, num_service=1
a.task_simulate(50.0, 70.0, 50, 10, 1)
```

```
[REPORT] 12(0.240) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 75.786464
```

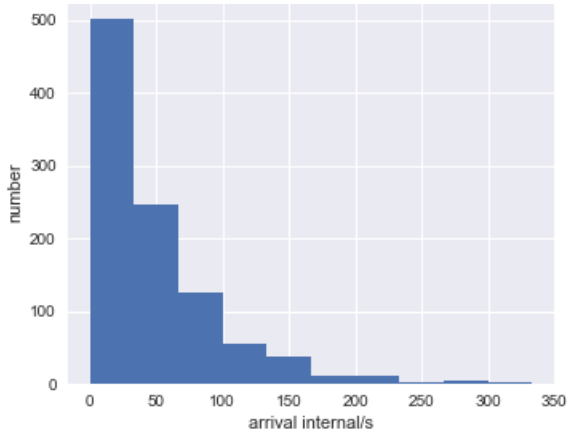


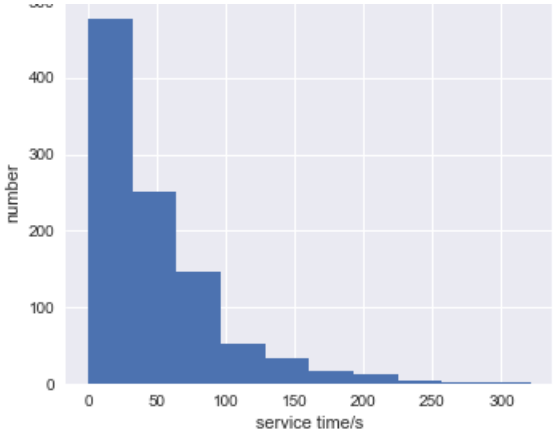


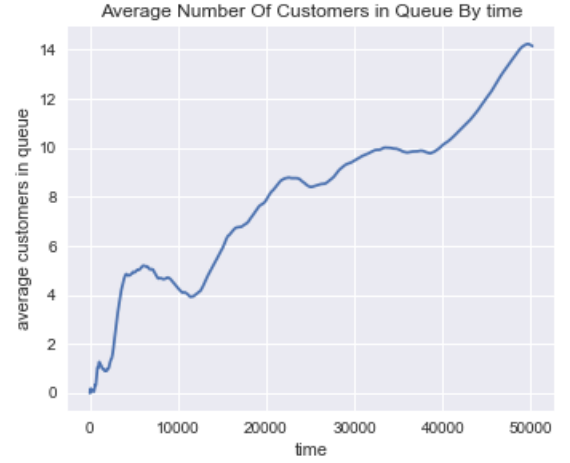


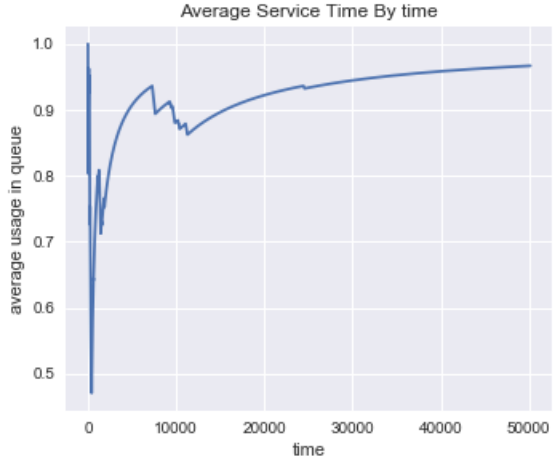
In [7]:
```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 1000, 200, 1)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 48.547394
```





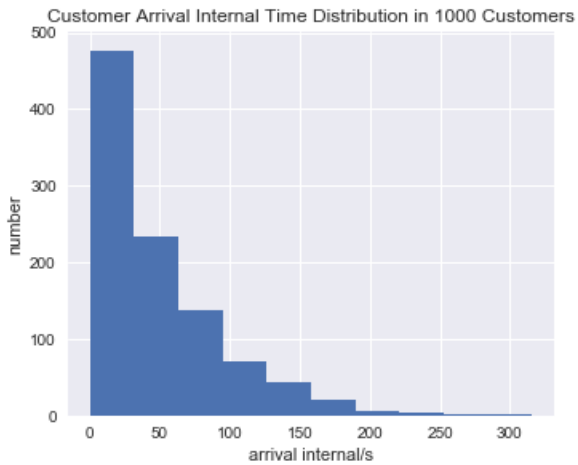


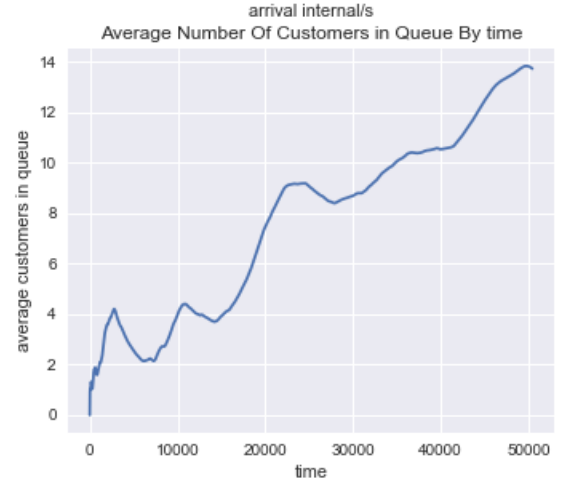


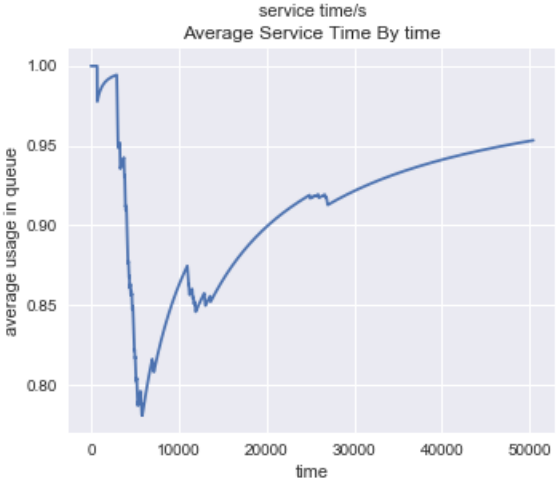
In [8]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 1000, 200, 1)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 48.066271
```

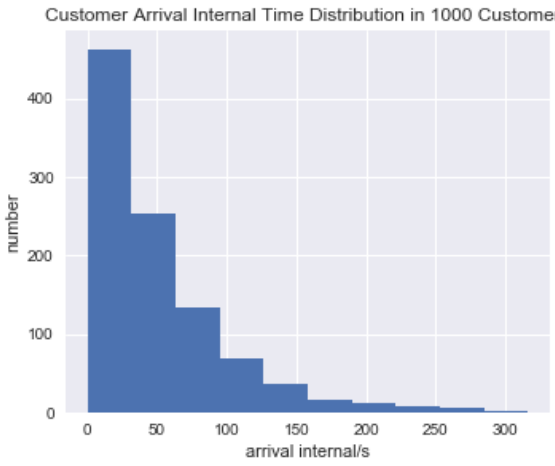


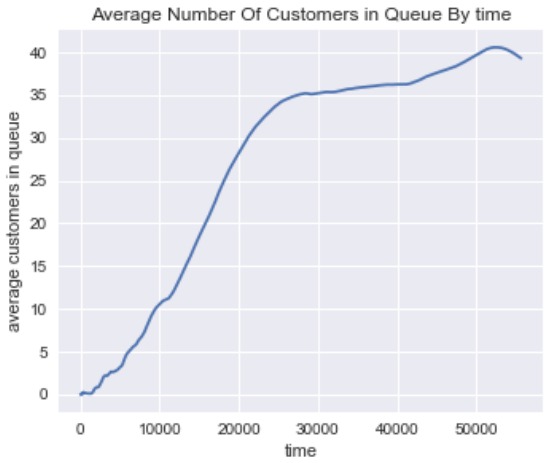


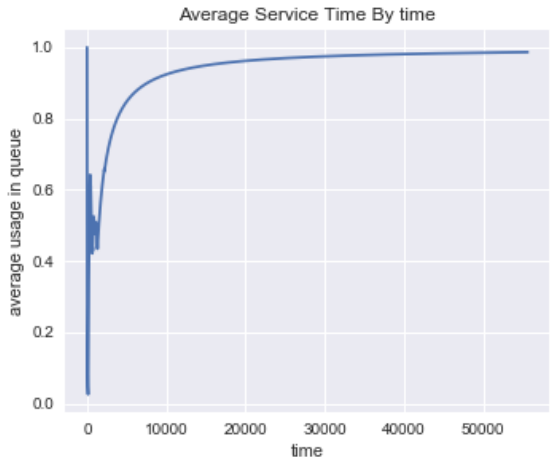


In [9]:
```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 1000, 200, 1)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 54.931356
```

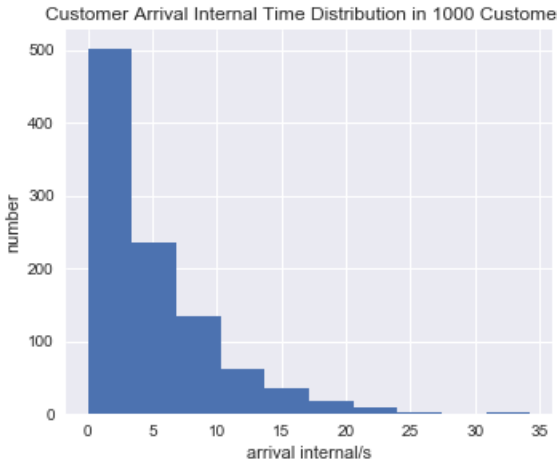


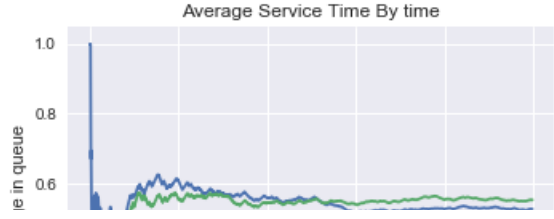


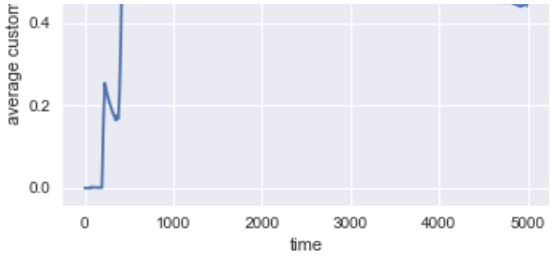


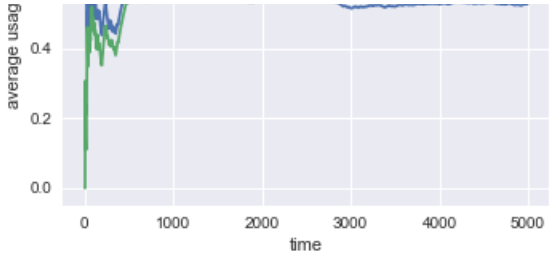
In [8]:
```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(5.0, 5.0, 1000, 200, 2)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 5.394708
```





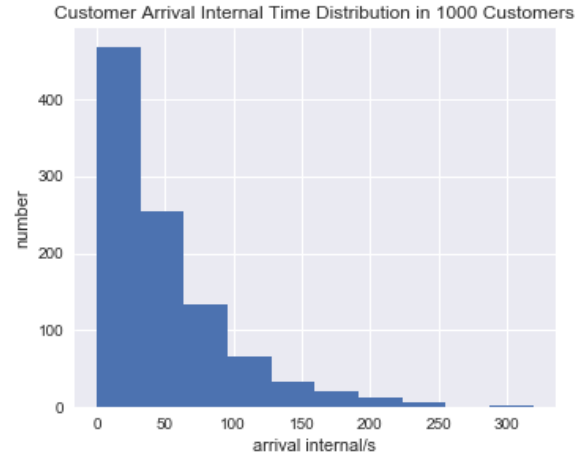


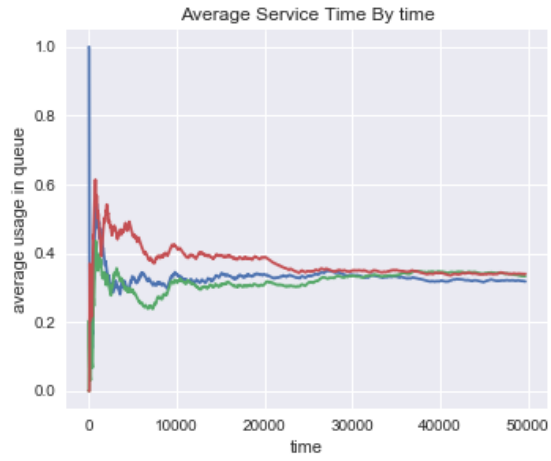


In [6]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 1000, 200, 3)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 49.391316
```

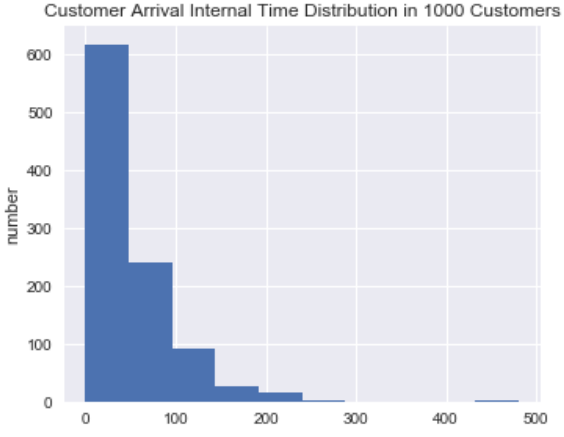


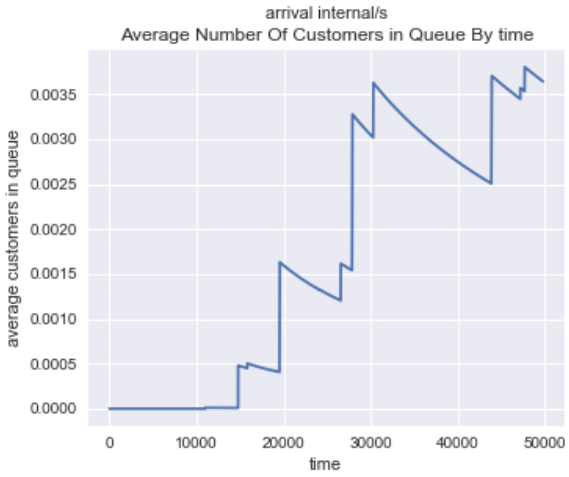


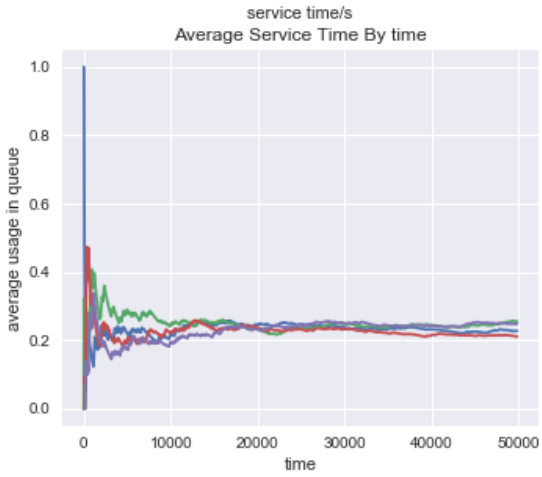
In [5]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 1000, 200, 4)
```

```
[REPORT] 1(0.001) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 47.088130
```

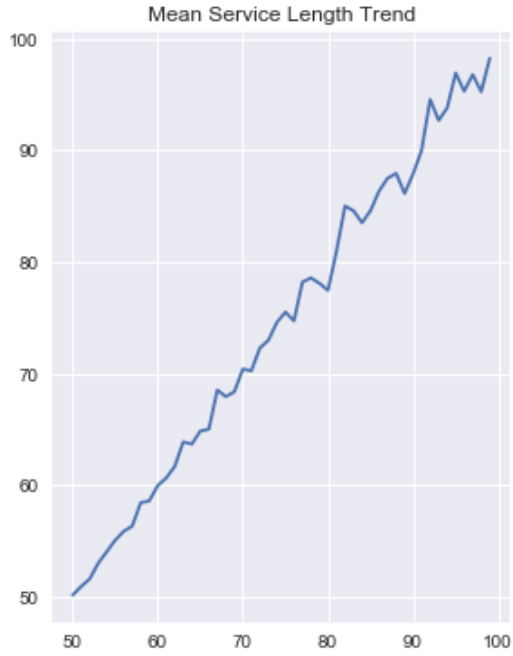


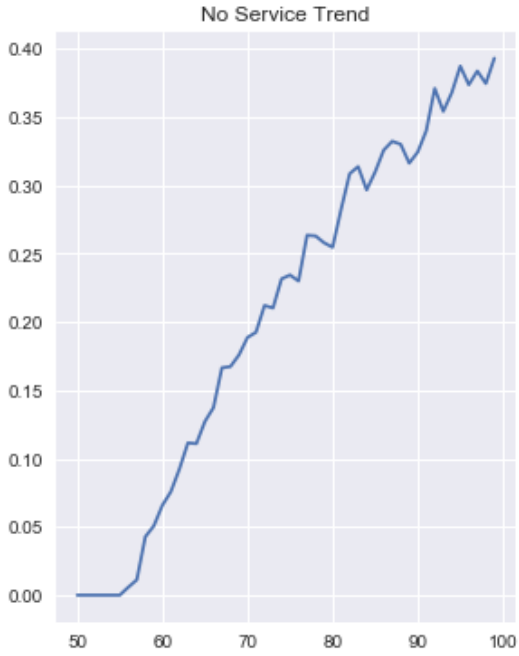




In [4]:

```
# mean_arrive=50.0, mean_serve=100.0, num_custom=10000, max_queue=1000, num_serv
service_mean_list = np.arange(50.0, 100.0, 1)
a.task_parameter_of_service_mean(50.0, service_mean_list, 10000, 1000, 1)
```



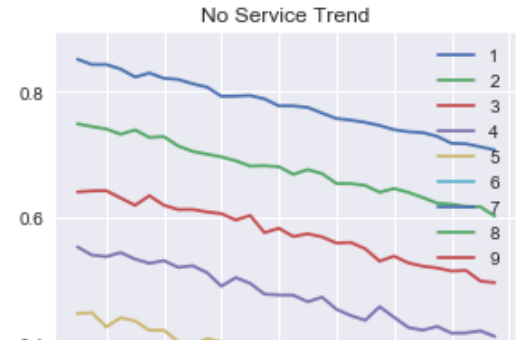


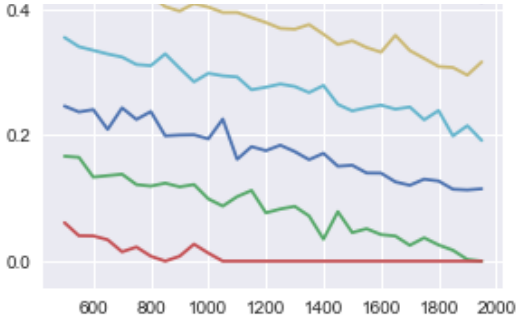
In [8]:

```
# mean_arrive=50.0, mean_serve=100.0, num_custom=10000, max_queue=1000, num_serv
# internal_mean_list = np.arange(50.0, 100.0, 1)
# a.task_parameter_of_arrival_mean(service_mean_list, 100.0,10000, 1000, 1)
```

In [3]:

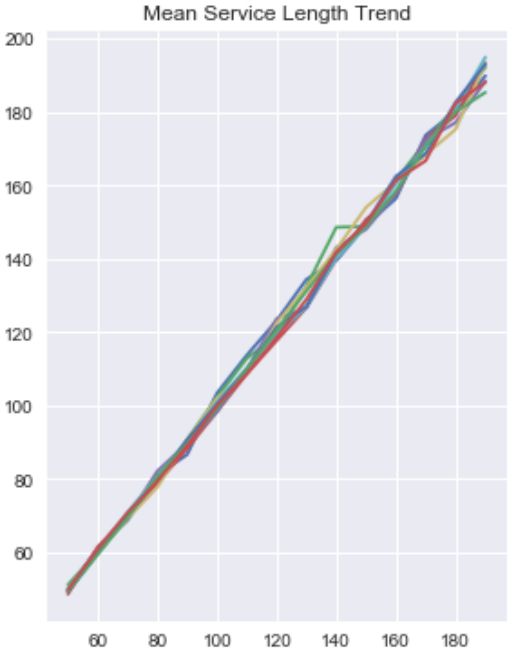
```
# mean_arrive=10.0, mean_serve=100.0, num_custom=10000, max_queue=1000, num_serv
service_list = range(1,10,1)
queue_size_list = range(500,2000,50)
a.task_parameter_of_queue_size(10, 100.0,10000, queue_size_list, service_list)
```

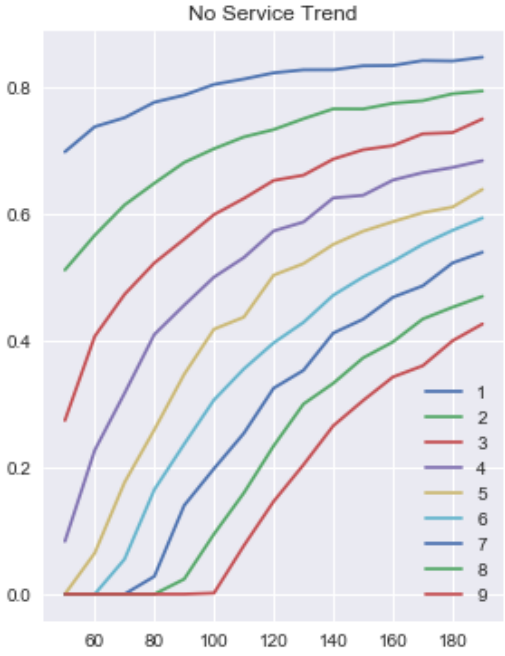




In [3]:

```
# mean_arrive=10.0, mean_serve=100.0, num_custom=10000, max_queue=1000, num_serv
service_list = range(1,10,1)
service_mean_list = range(50,200,10)
a.task_parameter_of_service_mean(10, service_mean_list,10000, 1000, service_list
```

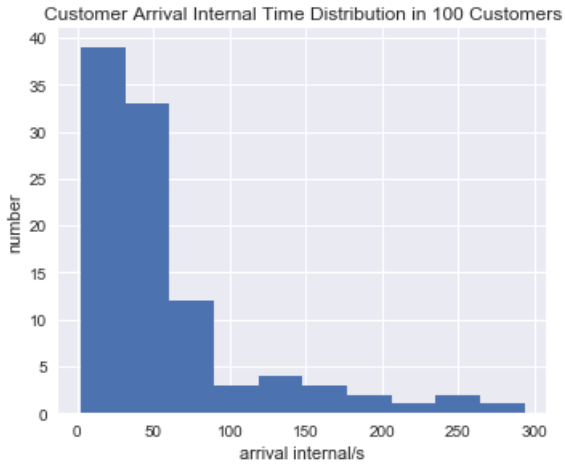


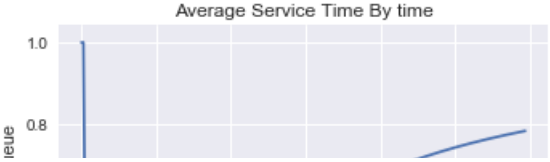


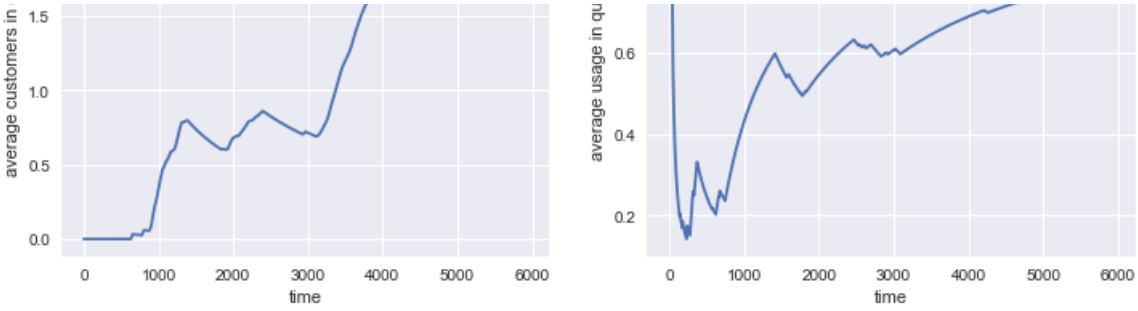
In [22]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 100, 20, 1)
```

```
[REPORT] 1(0.010) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 46.709689
```



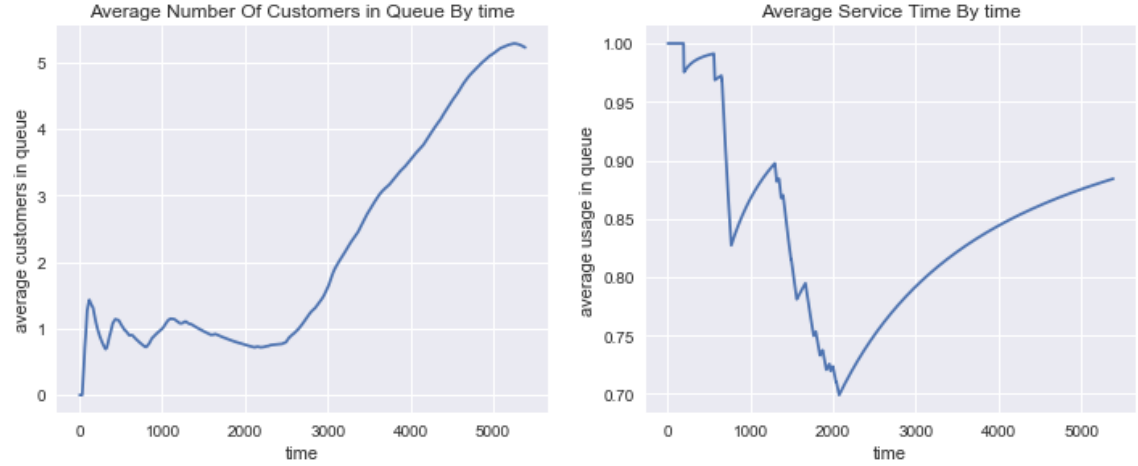


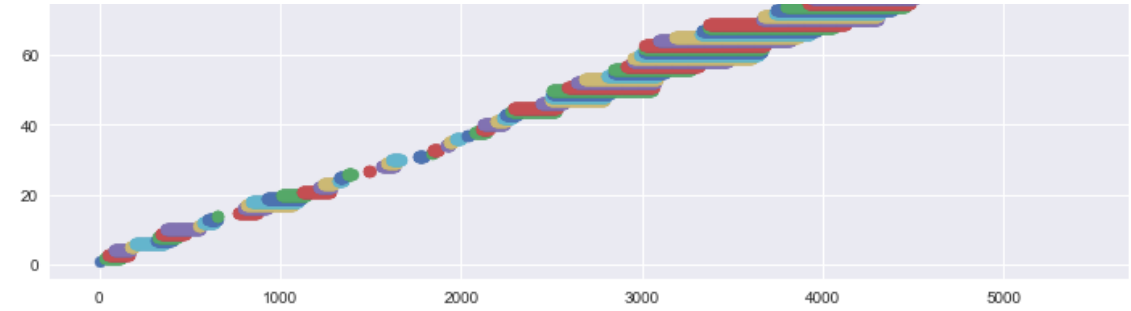


In [20]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 100, 20, 1)
```

```
[REPORT] 1(0.010) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 47.199126
```

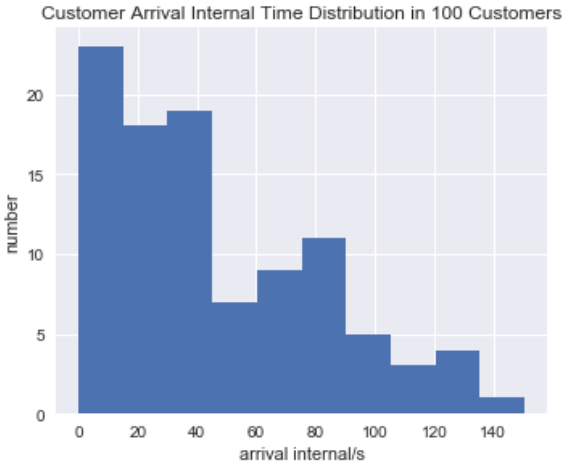


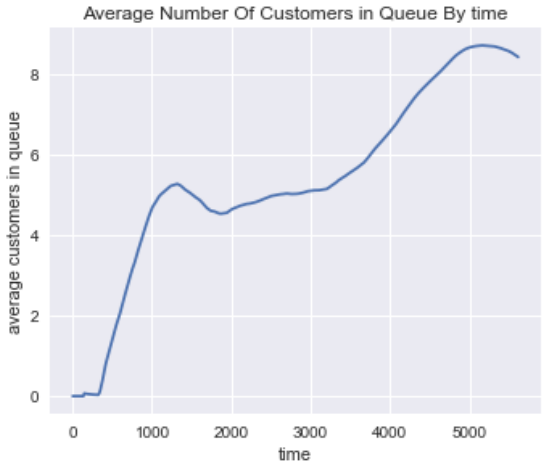


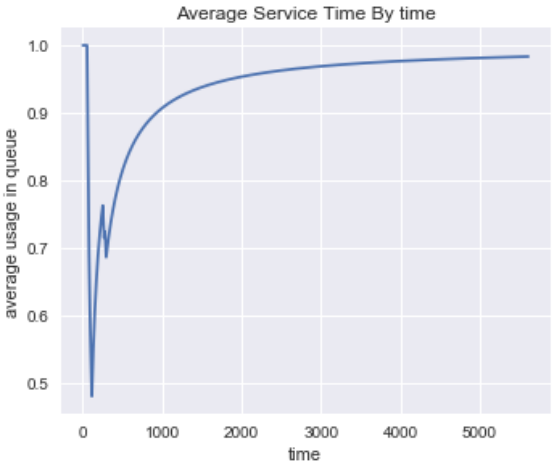
In [23]:

```
# mean_arrive=50.0, mean_serve=50.0, num_custom=100, max_queue=20, num_service=1
a.task_simulate(50.0, 50.0, 100, 20, 1)
```

```
[REPORT] 1(0.010) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 55.183555
```



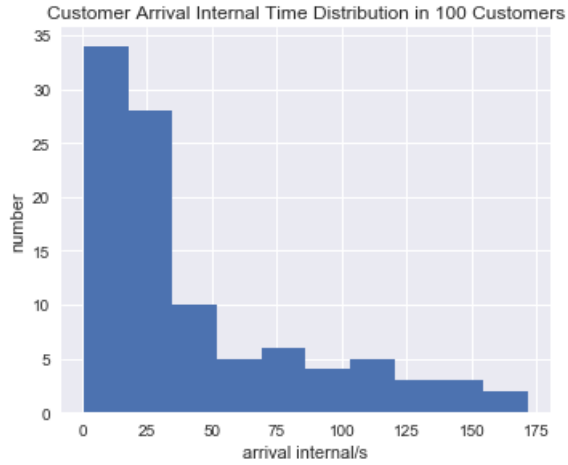


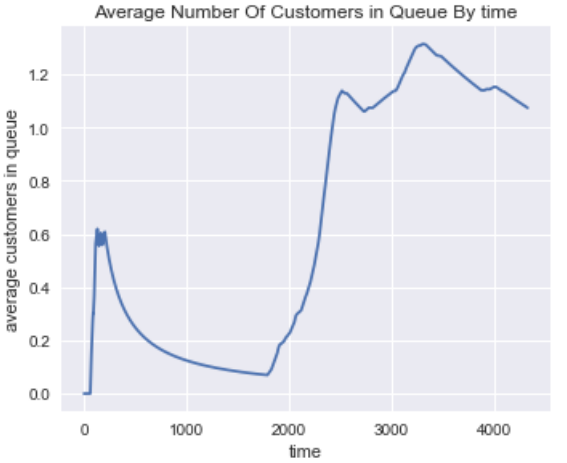


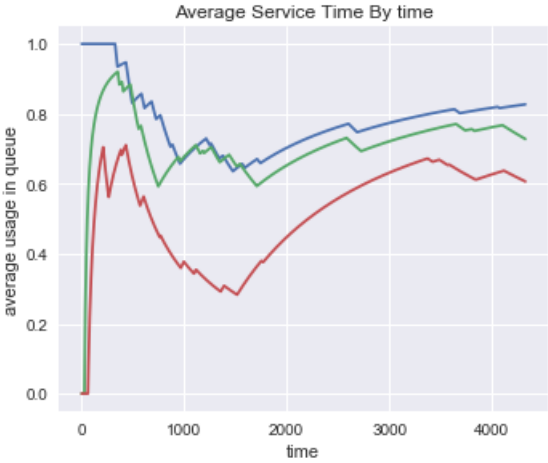
In [8]:

```
# mean_arrive=50.0, mean_serve=100.0, num_custom=100, max_queue=10, num_service=
a.task_simulate(50.0, 100.0, 100, 10, 3)
```

```
[REPORT] 1(0.010) customers leave due to overflow of queue.
[REPORT] average service process for served customers is 92.430743
```

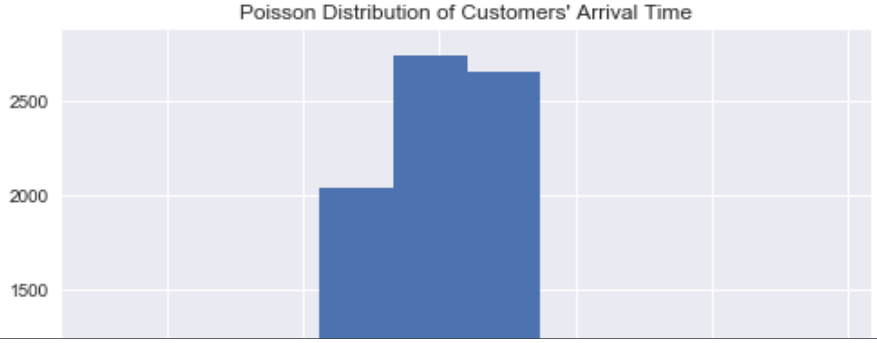


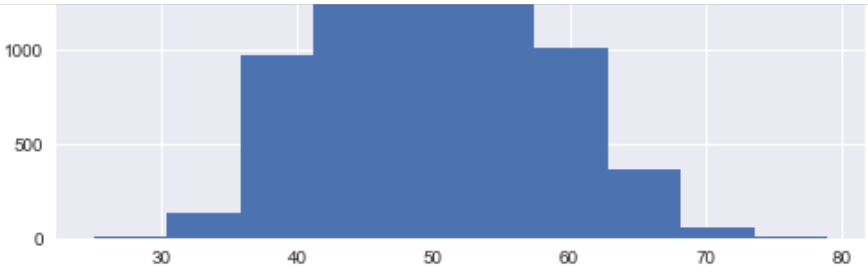




In [7]:

```
# 人流分布特点
x = np.random.poisson(lam=50.0, size=10000)  # lam为λ size为k
plt.hist(x)
plt.title("Poisson Distribution of Customers' Arrival Time")
plt.show()
```





In [ ]: