

```

Input:  $\lambda \mu k T$ 
Output:  $L W$ 
 $t \leftarrow 0, n \leftarrow 0, A \leftarrow 0, D_i \leftarrow \infty$  for  $i = 1, 2, \dots, k, L \leftarrow 0, W \leftarrow 0$ ;
while  $t < T$  do
  if  $A < \min(D_1, D_2, \dots, D_k)$  then
     $t \leftarrow A; n \leftarrow n + 1; A \leftarrow t - \ln(U)/\lambda$ ; if  $n \leq k$  then
       $i \leftarrow \text{theidleserver}; D_i \leftarrow t - \ln(U)/\mu$ ;
    end
     $L \leftarrow L + (n - 1)(t - T_{last}); T_{last} \leftarrow t$ ;
  end
  else
     $t \leftarrow \min(D_1, D_2, \dots, D_k)$ ;
     $n \leftarrow n - \text{thenumberofserversthatfinishserviceatt}$ ; for
       $i = 1, 2, \dots, k$  do
        if  $D_i = t$  then
          if  $n \geq k$  then
             $D_i \leftarrow \infty$ ;
          end
          else
             $D_i \leftarrow t - \ln(U)/\mu; W \leftarrow W + (t - A)$ ;
          end
        end
      end
    end
  end
end
 $L \leftarrow L/T; W \leftarrow W/n$ ;

```

Algorithm 1: MMk Queueing System Simulation