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| CODE |

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\*File : p11.cpp

\*Description : Write a program for congestion control using leaky bucket algorithm..

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\*Tools : Ubuntu 13.04, gcc 4.7.3 compiler, Code::Blocks

\*Date : 8 October 2013

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#include <iostream>

#include <iomanip>

using namespace std;

int min(int x, int y)

{

if(x<y)

return x;

else

return y;

}

int main()

{

int size,count=0,drop,time,in[30],sent,rate,i;

cout<<"Enter bucket size (no of packets): ";

cin>>size;

cout<<"Enter bandwidth (packets/second): ";

cin>>rate;

cout<<"Enter burst time (seconds): ";

cin>>time;

for(i=1;i<=time;i++)

{

cout<<"\tEnter number of packets at time "<<i<<": ";

cin>>in[i];

}

cout<<"----------------------------------------------"<<endl;

cout<<"Time |"<<" Incomming |"<<" Outgoing |"<<" InBucket |"<<" Drop "<<endl;

cout<<"----------------------------------------------"<<endl;

for(i=1;i<=time;i++)

{

count+=in[i];

if(count>size)

{

drop=count-size;

count=size;

}

else

{

drop=0;

}

sent=min(count,rate);

count-=sent;

cout<<setw(3)<<i<<setw(9)<<in[i]<<setw(11)<<sent<<setw(11)<<count<<setw(9)<<drop;

if(drop)

{

cout<<" <-- non conforming packets";

}

cout<<endl;

}

for(;count!=0;i++)

{

drop=0;

sent=min(count,rate);

count-=sent; cout<<setw(3)<<i<<setw(9)<<"0"<<setw(11)<<sent<<setw(11)<<count<<setw(9)<<drop<<endl;

}

cout<<"----------------------------------------------"<<endl;

return 0;

}

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| **OUTPUT** |

