Detecting a Closed Connection on recv()

Some Operating Systems (OS) do not return 0 bytes when you call recv() after the other side closed the connection. Instead they return -1 and set errno = ECONNRESET. This error is a "Connection reset by peer" error, which means the other side closed the connection.

To detect the connection was closed via the return value from recv() we must do both:

1. Check if 0 bytes were recv()ed (this means the return value from recv() was 0). If so we know the other side closed the connection

2. Check if the recv() return value as -1 and the errno was ECONNRESET. If so, then handle this as a closed connection and not an error condition.

Here is a function that you can use in place of the normal recv() call to handle both of these cases. Feel free to use this code.

```
int safeRecv(int socketNum, uint8_t * buffer, int bufferLen, int flag)
{
   int bytesReceived = recv(socketNum, buffer, bufferLen, flag);
   if (bytesReceived < 0)
   {
      if (errno == ECONNRESET)
      {
         bytesReceived = 0;
      }
      else
      {
         perror("recv call");
         exit(-1);
      }
   }
   return bytesReceived ;
}
```