

```

function [v] = objgenK(bf,K)
% [v] = objgenK(bf,K) produces a random vector v of K objects.
% Argument bf is the placement probability vector
% Argument K is the integer size of the cache (in number of objects)
%
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% Create the construction for each line of K
% 1. We make a cumulative sum
bf = [0, bf];
C = cumsum(bf);
%
% 2. We through a random variable in [0,1]
r = rand;
%
% 3. We construct from rand a vector of K positions
rK = rand + [0:K-1];
%
% 4. rK denotes the chosen object vector
[w,v] = histc(rK,C);
%
% count objects from 1 and on
if sum(v==0)==1
    v(K) = -1;
end
end

```