## Answer on Question #45296, Programming, Mat LAB | Mathematica | MathCAD | Maple

## Problem.

```
If there is a group of n people in a room,
what is the probability that two or more of them having same
birthday? It is possible to determine answer to this question by simulation.
(Hint:
You can generate
random dates
n times and determine the
fraction of people who born in a given day).
Write a f
unction
that determines the answer to this question by simulation. The
program
you wr
ite can take n as the
input
and prints out
the probability that two or more of n people will have the same birthday for
n=2,3,4.... 40
Solution.
Code (MATLAB)
function probability()
     clc();
     % Input
     n = input('The number of people: ');
     for i = 1:1:4
          % The number of simulations
         m = 10^i;
          % The number of successful simulations
          % (when there is two or more people with same birthday date)
          simSuc = 0;
```

fprintf('The probability equals %f (%d simulations) \n', simSuc/m, m);

end Result

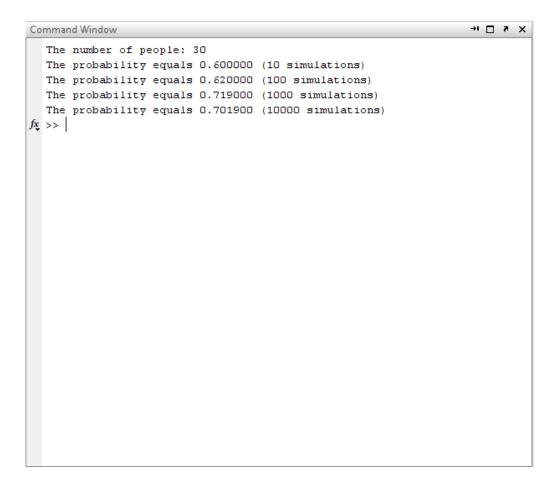
end

% Simulation loop
for j = 1:1:m

end

end
% Output

simGrp = randi(365, 1, n);
if length(unique(simGrp)) ~= n
 simSuc = simSuc + 1;



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