
Automated Seating Arrangement Generation System, For Curbing Examination Malpractices in Nigerian Education System

Ojekunle Peter

Department of Electronics and Electrical Engineering

The Polytechnic Igbo-Owu

Kwara State, Nigeria

E-mail: Peterojekunle2013@gmail.com

Phone: 08160681426

ABSTRACT

Examination malpractices have been major challenges in the Nigeria education, and have imposed a great problem to its standard of education. In this paper the generation of the seating arrangement was carried out using randomization technique in MATLAB. A set of numbers (Matriculation numbers or Admission numbers as the case may be) is inputted into the programme and the automatic randomization of the number is carried out by the programme. The programme generates the output numbers without any previous number next to the former one irrespective of the number of times the programme is executed. It is designed to reduce the level of examination malpractices and the need for lecturer to be rearranging the students manually which could have been time consuming and tedious.

Keyword: MATLAB, Randomization, Matriculation, Malpractices, Algorithm

1. INTRODUCTION

There has been a great problem in the Nigeria education especially in term of examination malpractices, this has been affecting the various educational sector that we have, basic educations, junior secondary, senior secondary, colleges and universities and this has been a great challenge to the ministry of education in Nigeria. Examination malpractices have been believed as a cankerworm that portends grave dangers for the nation. Decentralization of the examinations (Lekan, 2013), improvement in teachers training reduced length for the holidays, introduction of guidance and counselors in the school system and proper searching of student before they enter the class (Nurani, 2015) are various ways of reducing examination malpractices. There is also a great deal of interest in utilizing music inspired harmony search algorithm for automated examination seating arrangement generation system (Arnav *et al.*, 2011).

This ensure that none of the students appearing for the same subject have been allocated adjacent seats but failed to consider the front and the back seats and the number of arrangement is limited. But in this paper, reduction of examination malpractices through the use of randomization of number in order to reduce academic alliance by students during examination will be employed. Randomization of numbers has been defined as generation of a set of numbers in an unpredicted way. The knowledge of randomization has been used in many situations including psychology, experiments, medical trials, and survey research.

The ability to generate pseudorandom numbers is important for simulating events, estimating probabilities and other quantities, making randomized selections, and numerically results.

Such applications may require uniformly distributed numbers, non-uniformly distributed numbers, elements sampled with replacement, or elements sampled without replacement (Matsumoto & Nishimura, 1998).

2. RANDOMIZATION ALGORITHM

Randomization algorithm is an algorithm that employs a degree of randomness as a part of its logic. And it can also be view as an algorithm that uses random numbers to influence the choices it makes in the course of its generation. The origin of randomized algorithms can be traced back to *Monte Carlo methods* used in numerical statistical physics, analysis, and simulation (Solovay & Strassen, 1977). The earliest examples of concrete randomized algorithms appeared in the work of Berlekamp, Rabin and Solovay and Strassen. Rabin explicitly proposed randomization as an algorithmic tool using as examples problems in computational geometry and in number theory (Solovay & Strassen, 1977). At about the same time, Solovay and Strassen presented a randomized partiality-testing algorithm; which was later predated by the randomized polynomial-factoring algorithm presented by Berlekamp (1976). Since then, an impressive array of techniques for devising and analyzing randomized algorithms has been developed.

3. METHODOLOGY

The code which include, the school code, year of admission, the faculty code, and the departmental code including the matriculation number, (which is taken as 1(one) for the first matriculation number, been the number allocated to the first student) and the final matriculation number (the number allocated to the last student, which is taken as 50 for the purpose of this paper) are supplied as input into the programme. 'ND', '13', 'FS', 'BAM' have been put into the programme to indicate that the students enroll for National Diploma(ND) programme in the year 2013, Faculty of Social Sciences and also students of Business Administration (all these can be modified to suit any other design). Here the randomization functions in MATLAB are used to generate the output which range from the first matriculation number to the last matriculation number in a random manner. And appropriate seat number is allocated to the corresponding output.

4. RESULT AND DISCUSSION

Table 1, table 2, table 3, table 4 and table 5 shows the output of the randomization of numbers carried out by the programme. The programme is done in MATLAB and runs for 10 times and it show that there is no particular number that can be seen immediately next to the one it follows before. Therefore, this can be used as an automated seating arrangement generation system, a way of curbing examination malpractices among the students during examination.

Table: 1 Generated output for first and second seating arrangement

First generation for the seating arrangement		Second generation for the seating arrangement	
THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION		THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION	
Seat No	Matric Number	Seat No	Matric Number
1	ND/13/FS/BAM/0018	1	ND/13/FS/BAM/0034
2	ND/13/FS/BAM/005	2	ND/13/FS/BAM/0021
3	ND/13/FS/BAM/003	3	ND/13/FS/BAM/0042
4	ND/13/FS/BAM/0016	4	ND/13/FS/BAM/002
5	ND/13/FS/BAM/0037	5	ND/13/FS/BAM/0027
6	ND/13/FS/BAM/0030	6	ND/13/FS/BAM/0019
7	ND/13/FS/BAM/0046	7	ND/13/FS/BAM/0022
8	ND/13/FS/BAM/0050	8	ND/13/FS/BAM/005
9	ND/13/FS/BAM/0048	9	ND/13/FS/BAM/0033
10	ND/13/FS/BAM/0013	10	ND/13/FS/BAM/0017
11	ND/13/FS/BAM/0028	11	ND/13/FS/BAM/0026
12	ND/13/FS/BAM/0043	12	ND/13/FS/BAM/0037
13	ND/13/FS/BAM/0040	13	ND/13/FS/BAM/007
14	ND/13/FS/BAM/0035	14	ND/13/FS/BAM/0050
15	ND/13/FS/BAM/0011	15	ND/13/FS/BAM/0039
16	ND/13/FS/BAM/0039	16	ND/13/FS/BAM/0013
17	ND/13/FS/BAM/0012	17	ND/13/FS/BAM/006
18	ND/13/FS/BAM/0014	18	ND/13/FS/BAM/0048
19	ND/13/FS/BAM/0032	19	ND/13/FS/BAM/008
20	ND/13/FS/BAM/0020	20	ND/13/FS/BAM/0040
21	ND/13/FS/BAM/008	21	ND/13/FS/BAM/0010
22	ND/13/FS/BAM/0029	22	ND/13/FS/BAM/001
23	ND/13/FS/BAM/0019	23	ND/13/FS/BAM/0036
24	ND/13/FS/BAM/0026	24	ND/13/FS/BAM/0015
25	ND/13/FS/BAM/0042	25	ND/13/FS/BAM/0023
26	ND/13/FS/BAM/0049	26	ND/13/FS/BAM/0011
27	ND/13/FS/BAM/002	27	ND/13/FS/BAM/0046
28	ND/13/FS/BAM/004	28	ND/13/FS/BAM/0024
29	ND/13/FS/BAM/0022	29	ND/13/FS/BAM/003
30	ND/13/FS/BAM/0024	30	ND/13/FS/BAM/0025
31	ND/13/FS/BAM/0010	31	ND/13/FS/BAM/0031
32	ND/13/FS/BAM/001	32	ND/13/FS/BAM/0014
33	ND/13/FS/BAM/0027	33	ND/13/FS/BAM/0047
34	ND/13/FS/BAM/0021	34	ND/13/FS/BAM/0012
35	ND/13/FS/BAM/0025	35	ND/13/FS/BAM/0049
36	ND/13/FS/BAM/0017	36	ND/13/FS/BAM/0029
37	ND/13/FS/BAM/009	37	ND/13/FS/BAM/009
38	ND/13/FS/BAM/0045	38	ND/13/FS/BAM/0044
39	ND/13/FS/BAM/006	39	ND/13/FS/BAM/004
40	ND/13/FS/BAM/0036	40	ND/13/FS/BAM/0016
41	ND/13/FS/BAM/0033	41	ND/13/FS/BAM/0020
42	ND/13/FS/BAM/0015	42	ND/13/FS/BAM/0035
43	ND/13/FS/BAM/0038	43	ND/13/FS/BAM/0043
44	ND/13/FS/BAM/0023	44	ND/13/FS/BAM/0018
45	ND/13/FS/BAM/0041	45	ND/13/FS/BAM/0028
46	ND/13/FS/BAM/0044	46	ND/13/FS/BAM/0041
47	ND/13/FS/BAM/0031	47	ND/13/FS/BAM/0030
48	ND/13/FS/BAM/007	48	ND/13/FS/BAM/0045
49	ND/13/FS/BAM/0034	49	ND/13/FS/BAM/0032
50	ND/13/FS/BAM/0047	50	ND/13/FS/BAM/0038

Table: 2 Generated output for third and fourth seating arrangement

Third generation for the seating arrangement		Fourth generation for the seating arrangement	
THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION		THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION	
Seat No	Matric Number	Seat No	Matric Number
1	ND/13/FS/BAM/0040	1	ND/13/FS/BAM/0048
2	ND/13/FS/BAM/0022	2	ND/13/FS/BAM/007
3	ND/13/FS/BAM/009	3	ND/13/FS/BAM/0028
4	ND/13/FS/BAM/0011	4	ND/13/FS/BAM/0044
5	ND/13/FS/BAM/0026	5	ND/13/FS/BAM/0025
6	ND/13/FS/BAM/0043	6	ND/13/FS/BAM/0050
7	ND/13/FS/BAM/0036	7	ND/13/FS/BAM/0040
8	ND/13/FS/BAM/0034	8	ND/13/FS/BAM/001
9	ND/13/FS/BAM/0024	9	ND/13/FS/BAM/0011
10	ND/13/FS/BAM/0033	10	ND/13/FS/BAM/0029
11	ND/13/FS/BAM/0035	11	ND/13/FS/BAM/0021
12	ND/13/FS/BAM/0029	12	ND/13/FS/BAM/0019
13	ND/13/FS/BAM/0041	13	ND/13/FS/BAM/0037
14	ND/13/FS/BAM/0045	14	ND/13/FS/BAM/0046
15	ND/13/FS/BAM/0042	15	ND/13/FS/BAM/004
16	ND/13/FS/BAM/0049	16	ND/13/FS/BAM/0010
17	ND/13/FS/BAM/0015	17	ND/13/FS/BAM/0041
18	ND/13/FS/BAM/004	18	ND/13/FS/BAM/0014
19	ND/13/FS/BAM/0017	19	ND/13/FS/BAM/0033
20	ND/13/FS/BAM/0019	20	ND/13/FS/BAM/008
21	ND/13/FS/BAM/0047	21	ND/13/FS/BAM/0020
22	ND/13/FS/BAM/0010	22	ND/13/FS/BAM/0017
23	ND/13/FS/BAM/001	23	ND/13/FS/BAM/0036
24	ND/13/FS/BAM/007	24	ND/13/FS/BAM/0047
25	ND/13/FS/BAM/002	25	ND/13/FS/BAM/0016
26	ND/13/FS/BAM/0025	26	ND/13/FS/BAM/0031
27	ND/13/FS/BAM/003	27	ND/13/FS/BAM/009
28	ND/13/FS/BAM/005	28	ND/13/FS/BAM/0024
29	ND/13/FS/BAM/008	29	ND/13/FS/BAM/006
30	ND/13/FS/BAM/0031	30	ND/13/FS/BAM/0022
31	ND/13/FS/BAM/0023	31	ND/13/FS/BAM/003
32	ND/13/FS/BAM/0021	32	ND/13/FS/BAM/0032
33	ND/13/FS/BAM/0030	33	ND/13/FS/BAM/0034
34	ND/13/FS/BAM/006	34	ND/13/FS/BAM/0013
35	ND/13/FS/BAM/0028	35	ND/13/FS/BAM/0027
36	ND/13/FS/BAM/0046	36	ND/13/FS/BAM/0026
37	ND/13/FS/BAM/0020	37	ND/13/FS/BAM/0049
38	ND/13/FS/BAM/0012	38	ND/13/FS/BAM/0043
39	ND/13/FS/BAM/0016	39	ND/13/FS/BAM/0045
40	ND/13/FS/BAM/0032	40	ND/13/FS/BAM/0018
41	ND/13/FS/BAM/0018	41	ND/13/FS/BAM/0038
42	ND/13/FS/BAM/0050	42	ND/13/FS/BAM/0035
43	ND/13/FS/BAM/0039	43	ND/13/FS/BAM/005
44	ND/13/FS/BAM/0014	44	ND/13/FS/BAM/0042
45	ND/13/FS/BAM/0048	45	ND/13/FS/BAM/0012
46	ND/13/FS/BAM/0038	46	ND/13/FS/BAM/0023
47	ND/13/FS/BAM/0037	47	ND/13/FS/BAM/002
48	ND/13/FS/BAM/0013	48	ND/13/FS/BAM/0015
49	ND/13/FS/BAM/0027	49	ND/13/FS/BAM/0030
50	ND/13/FS/BAM/0044	50	ND/13/FS/BAM/0039

Table: 3 Generated output for fifth and sixth seating arrangement

Fifth generation for the seating arrangement		sixth generation for the seating arrangement	
THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION		THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION	
Seat No	Matric Number	Seat No	Matric Number
1	ND/13/FS/BAM/0034	1	ND/13/FS/BAM/0032
2	ND/13/FS/BAM/0032	2	ND/13/FS/BAM/0037
3	ND/13/FS/BAM/0028	3	ND/13/FS/BAM/0017
4	ND/13/FS/BAM/0041	4	ND/13/FS/BAM/0047
5	ND/13/FS/BAM/0021	5	ND/13/FS/BAM/001
6	ND/13/FS/BAM/0013	6	ND/13/FS/BAM/0028
7	ND/13/FS/BAM/007	7	ND/13/FS/BAM/0030
8	ND/13/FS/BAM/0019	8	ND/13/FS/BAM/0024
9	ND/13/FS/BAM/0035	9	ND/13/FS/BAM/003
10	ND/13/FS/BAM/0046	10	ND/13/FS/BAM/0031
11	ND/13/FS/BAM/0011	11	ND/13/FS/BAM/009
12	ND/13/FS/BAM/0036	12	ND/13/FS/BAM/0018
13	ND/13/FS/BAM/0049	13	ND/13/FS/BAM/0039
14	ND/13/FS/BAM/0030	14	ND/13/FS/BAM/0022
15	ND/13/FS/BAM/0024	15	ND/13/FS/BAM/0010
16	ND/13/FS/BAM/0033	16	ND/13/FS/BAM/0040
17	ND/13/FS/BAM/0018	17	ND/13/FS/BAM/002
18	ND/13/FS/BAM/0039	18	ND/13/FS/BAM/0013
19	ND/13/FS/BAM/002	19	ND/13/FS/BAM/0044
20	ND/13/FS/BAM/0010	20	ND/13/FS/BAM/0035
21	ND/13/FS/BAM/0050	21	ND/13/FS/BAM/0049
22	ND/13/FS/BAM/004	22	ND/13/FS/BAM/0034
23	ND/13/FS/BAM/0023	23	ND/13/FS/BAM/008
24	ND/13/FS/BAM/001	24	ND/13/FS/BAM/0043
25	ND/13/FS/BAM/0027	25	ND/13/FS/BAM/0023
26	ND/13/FS/BAM/008	26	ND/13/FS/BAM/0019
27	ND/13/FS/BAM/0022	27	ND/13/FS/BAM/0041
28	ND/13/FS/BAM/0042	28	ND/13/FS/BAM/006
29	ND/13/FS/BAM/0047	29	ND/13/FS/BAM/0026
30	ND/13/FS/BAM/0026	30	ND/13/FS/BAM/0046
31	ND/13/FS/BAM/0045	31	ND/13/FS/BAM/0025
32	ND/13/FS/BAM/005	32	ND/13/FS/BAM/0021
33	ND/13/FS/BAM/0038	33	ND/13/FS/BAM/007
34	ND/13/FS/BAM/0031	34	ND/13/FS/BAM/0038
35	ND/13/FS/BAM/0020	35	ND/13/FS/BAM/0015
36	ND/13/FS/BAM/0025	36	ND/13/FS/BAM/0045
37	ND/13/FS/BAM/0015	37	ND/13/FS/BAM/004
38	ND/13/FS/BAM/0012	38	ND/13/FS/BAM/0027
39	ND/13/FS/BAM/0044	39	ND/13/FS/BAM/0033
40	ND/13/FS/BAM/003	40	ND/13/FS/BAM/0050
41	ND/13/FS/BAM/0014	41	ND/13/FS/BAM/0048
42	ND/13/FS/BAM/0043	42	ND/13/FS/BAM/0029
43	ND/13/FS/BAM/009	43	ND/13/FS/BAM/0036
44	ND/13/FS/BAM/006	44	ND/13/FS/BAM/0012
45	ND/13/FS/BAM/0017	45	ND/13/FS/BAM/0042
46	ND/13/FS/BAM/0016	46	ND/13/FS/BAM/005
47	ND/13/FS/BAM/0048	47	ND/13/FS/BAM/0016
48	ND/13/FS/BAM/0029	48	ND/13/FS/BAM/0020
49	ND/13/FS/BAM/0037	49	ND/13/FS/BAM/0014
50	ND/13/FS/BAM/0040	50	ND/13/FS/BAM/0011

Table: 4 Generated output for seventh and eighth seating arrangement

Seventh generation for the seating arrangement		Eighth generation for the seating arrangement	
THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION		THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION	
Seat No	Matric Number	Seat No	Matric Number
1	ND/13/FS/BAM/0027	1	ND/13/FS/BAM/0032
2	ND/13/FS/BAM/0015	2	ND/13/FS/BAM/0037
3	ND/13/FS/BAM/003	3	ND/13/FS/BAM/0017
4	ND/13/FS/BAM/0037	4	ND/13/FS/BAM/0047
5	ND/13/FS/BAM/0040	5	ND/13/FS/BAM/001
6	ND/13/FS/BAM/0019	6	ND/13/FS/BAM/0028
7	ND/13/FS/BAM/0048	7	ND/13/FS/BAM/0030
8	ND/13/FS/BAM/0024	8	ND/13/FS/BAM/0024
9	ND/13/FS/BAM/0035	9	ND/13/FS/BAM/003
10	ND/13/FS/BAM/0039	10	ND/13/FS/BAM/0031
11	ND/13/FS/BAM/0032	11	ND/13/FS/BAM/009
12	ND/13/FS/BAM/0044	12	ND/13/FS/BAM/0018
13	ND/13/FS/BAM/0034	13	ND/13/FS/BAM/0039
14	ND/13/FS/BAM/008	14	ND/13/FS/BAM/0022
15	ND/13/FS/BAM/0036	15	ND/13/FS/BAM/0010
16	ND/13/FS/BAM/0046	16	ND/13/FS/BAM/0040
17	ND/13/FS/BAM/001	17	ND/13/FS/BAM/002
18	ND/13/FS/BAM/0030	18	ND/13/FS/BAM/0013
19	ND/13/FS/BAM/006	19	ND/13/FS/BAM/0044
20	ND/13/FS/BAM/0010	20	ND/13/FS/BAM/0035
21	ND/13/FS/BAM/009	21	ND/13/FS/BAM/0049
22	ND/13/FS/BAM/0047	22	ND/13/FS/BAM/0034
23	ND/13/FS/BAM/0038	23	ND/13/FS/BAM/008
24	ND/13/FS/BAM/0026	24	ND/13/FS/BAM/0043
25	ND/13/FS/BAM/0031	25	ND/13/FS/BAM/0023
26	ND/13/FS/BAM/0017	26	ND/13/FS/BAM/0019
27	ND/13/FS/BAM/0022	27	ND/13/FS/BAM/0041
28	ND/13/FS/BAM/004	28	ND/13/FS/BAM/006
29	ND/13/FS/BAM/0041	29	ND/13/FS/BAM/0026
30	ND/13/FS/BAM/0012	30	ND/13/FS/BAM/0046
31	ND/13/FS/BAM/002	31	ND/13/FS/BAM/0025
32	ND/13/FS/BAM/0025	32	ND/13/FS/BAM/0021
33	ND/13/FS/BAM/005	33	ND/13/FS/BAM/007
34	ND/13/FS/BAM/0023	34	ND/13/FS/BAM/0038
35	ND/13/FS/BAM/0016	35	ND/13/FS/BAM/0015
36	ND/13/FS/BAM/007	36	ND/13/FS/BAM/0045
37	ND/13/FS/BAM/0013	37	ND/13/FS/BAM/004
38	ND/13/FS/BAM/0033	38	ND/13/FS/BAM/0027
39	ND/13/FS/BAM/0011	39	ND/13/FS/BAM/0033
40	ND/13/FS/BAM/0014	40	ND/13/FS/BAM/0050
41	ND/13/FS/BAM/0021	41	ND/13/FS/BAM/0048
42	ND/13/FS/BAM/0018	42	ND/13/FS/BAM/0029
43	ND/13/FS/BAM/0029	43	ND/13/FS/BAM/0036
44	ND/13/FS/BAM/0042	44	ND/13/FS/BAM/0012
45	ND/13/FS/BAM/0043	45	ND/13/FS/BAM/0042
46	ND/13/FS/BAM/0045	46	ND/13/FS/BAM/005
47	ND/13/FS/BAM/0028	47	ND/13/FS/BAM/0016
48	ND/13/FS/BAM/0050	48	ND/13/FS/BAM/0020
49	ND/13/FS/BAM/0049	49	ND/13/FS/BAM/0014
50	ND/13/FS/BAM/0020	50	ND/13/FS/BAM/0011

Table: 5 Generated output for ninth and tenth seating arrangement

Ninth generation for the seating arrangement		Tenth generation for the seating arrangement	
THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION		THIS IS THE SEATING ARRANGEMENT FOR THE EXAMINATION	
Seat No	Matric Number	Seat No	Matric Number
1	ND/13/FS/BAM/0034	1	ND/13/FS/BAM/006
2	ND/13/FS/BAM/0032	2	ND/13/FS/BAM/0019
3	ND/13/FS/BAM/0028	3	ND/13/FS/BAM/0032
4	ND/13/FS/BAM/0041	4	ND/13/FS/BAM/0014
5	ND/13/FS/BAM/0021	5	ND/13/FS/BAM/0029
6	ND/13/FS/BAM/0013	6	ND/13/FS/BAM/0042
7	ND/13/FS/BAM/007	7	ND/13/FS/BAM/0045
8	ND/13/FS/BAM/0019	8	ND/13/FS/BAM/0011
9	ND/13/FS/BAM/0035	9	ND/13/FS/BAM/0048
10	ND/13/FS/BAM/0046	10	ND/13/FS/BAM/0013
11	ND/13/FS/BAM/0011	11	ND/13/FS/BAM/0040
12	ND/13/FS/BAM/0036	12	ND/13/FS/BAM/003
13	ND/13/FS/BAM/0049	13	ND/13/FS/BAM/0036
14	ND/13/FS/BAM/0030	14	ND/13/FS/BAM/001
15	ND/13/FS/BAM/0024	15	ND/13/FS/BAM/0022
16	ND/13/FS/BAM/0033	16	ND/13/FS/BAM/0015
17	ND/13/FS/BAM/0018	17	ND/13/FS/BAM/009
18	ND/13/FS/BAM/0039	18	ND/13/FS/BAM/0030
19	ND/13/FS/BAM/002	19	ND/13/FS/BAM/0018
20	ND/13/FS/BAM/0010	20	ND/13/FS/BAM/0038
21	ND/13/FS/BAM/0050	21	ND/13/FS/BAM/0026
22	ND/13/FS/BAM/004	22	ND/13/FS/BAM/0023
23	ND/13/FS/BAM/0023	23	ND/13/FS/BAM/0025
24	ND/13/FS/BAM/001	24	ND/13/FS/BAM/004
25	ND/13/FS/BAM/0027	25	ND/13/FS/BAM/0046
26	ND/13/FS/BAM/008	26	ND/13/FS/BAM/0041
27	ND/13/FS/BAM/0022	27	ND/13/FS/BAM/0043
28	ND/13/FS/BAM/0042	28	ND/13/FS/BAM/007
29	ND/13/FS/BAM/0047	29	ND/13/FS/BAM/0047
30	ND/13/FS/BAM/0026	30	ND/13/FS/BAM/0050
31	ND/13/FS/BAM/0045	31	ND/13/FS/BAM/0035
32	ND/13/FS/BAM/005	32	ND/13/FS/BAM/0034
33	ND/13/FS/BAM/0038	33	ND/13/FS/BAM/002
34	ND/13/FS/BAM/0031	34	ND/13/FS/BAM/0020
35	ND/13/FS/BAM/0020	35	ND/13/FS/BAM/0044
36	ND/13/FS/BAM/0025	36	ND/13/FS/BAM/0033
37	ND/13/FS/BAM/0015	37	ND/13/FS/BAM/0024
38	ND/13/FS/BAM/0012	38	ND/13/FS/BAM/0016
39	ND/13/FS/BAM/0044	39	ND/13/FS/BAM/0028
40	ND/13/FS/BAM/003	40	ND/13/FS/BAM/0037
41	ND/13/FS/BAM/0014	41	ND/13/FS/BAM/0027
42	ND/13/FS/BAM/0043	42	ND/13/FS/BAM/0012
43	ND/13/FS/BAM/009	43	ND/13/FS/BAM/0010
44	ND/13/FS/BAM/006	44	ND/13/FS/BAM/005
45	ND/13/FS/BAM/0017	45	ND/13/FS/BAM/0031
46	ND/13/FS/BAM/0016	46	ND/13/FS/BAM/0017
47	ND/13/FS/BAM/0048	47	ND/13/FS/BAM/0049
48	ND/13/FS/BAM/0029	48	ND/13/FS/BAM/008
49	ND/13/FS/BAM/0037	49	ND/13/FS/BAM/0021
50	ND/13/FS/BAM/0040	50	ND/13/FS/BAM/0039

Table 6: Considering if the students whose matriculation number follows accordingly will be seating next or adjacent to each other using the first generated out by arranging them in a column.

Seat	Column 1	Column 2	Column 3
1	ND/13/FS/BAM/0018	ND/13/FS/BAM/0014	ND/13/FS/BAM/0025
2	ND/13/FS/BAM/005	ND/13/FS/BAM/0032	ND/13/FS/BAM/0017
3	ND/13/FS/BAM/003	ND/13/FS/BAM/0020	ND/13/FS/BAM/009
4	ND/13/FS/BAM/0016	ND/13/FS/BAM/008	ND/13/FS/BAM/0045
5	ND/13/FS/BAM/0037	ND/13/FS/BAM/0029	ND/13/FS/BAM/006
6	ND/13/FS/BAM/0030	ND/13/FS/BAM/0019	ND/13/FS/BAM/0036
7	ND/13/FS/BAM/0046	ND/13/FS/BAM/0026	ND/13/FS/BAM/0033
8	ND/13/FS/BAM/0050	ND/13/FS/BAM/0042	ND/13/FS/BAM/0015
9	ND/13/FS/BAM/0048	ND/13/FS/BAM/0049	ND/13/FS/BAM/0038
10	ND/13/FS/BAM/0013	ND/13/FS/BAM/002	ND/13/FS/BAM/0023
11	ND/13/FS/BAM/0028	ND/13/FS/BAM/004	ND/13/FS/BAM/0041
12	ND/13/FS/BAM/0043	ND/13/FS/BAM/0022	ND/13/FS/BAM/0044
13	ND/13/FS/BAM/0040	ND/13/FS/BAM/0024	ND/13/FS/BAM/0031
14	ND/13/FS/BAM/0035	ND/13/FS/BAM/0010	ND/13/FS/BAM/007
15	ND/13/FS/BAM/0011	ND/13/FS/BAM/001	ND/13/FS/BAM/0034
16	ND/13/FS/BAM/0039	ND/13/FS/BAM/0027	ND/13/FS/BAM/0047
17	ND/13/FS/BAM/0012	ND/13/FS/BAM/0021	

Table 7: Considering if the students whose matriculation number follows accordingly will be seating next or adjacent to each other using the first generated out by arranging them in a row.

	Seat	ND/13/FS/BAM/0018	ND/13/FS/BAM/005	ND/13/FS/BAM/003
Row 1	1	ND/13/FS/BAM/0016	ND/13/FS/BAM/0037	ND/13/FS/BAM/0030
Row 2	2	ND/13/FS/BAM/0046	ND/13/FS/BAM/0050	ND/13/FS/BAM/0048
Row 3	3	ND/13/FS/BAM/0013	ND/13/FS/BAM/0028	ND/13/FS/BAM/0043
Row 4	4	ND/13/FS/BAM/0040	ND/13/FS/BAM/0035	ND/13/FS/BAM/0011
Row 5	5	ND/13/FS/BAM/0039	ND/13/FS/BAM/0012	ND/13/FS/BAM/0014
Row 6	6	ND/13/FS/BAM/0032	ND/13/FS/BAM/0020	ND/13/FS/BAM/008
Row 7	7	ND/13/FS/BAM/0029	ND/13/FS/BAM/0019	ND/13/FS/BAM/0026
Row 8	8	ND/13/FS/BAM/0042	ND/13/FS/BAM/0049	ND/13/FS/BAM/002
Row 9	9	ND/13/FS/BAM/004	ND/13/FS/BAM/0022	ND/13/FS/BAM/0024
Row 10	10	ND/13/FS/BAM/0010	ND/13/FS/BAM/001	ND/13/FS/BAM/0027
Row 11	11	ND/13/FS/BAM/0021	ND/13/FS/BAM/0025	ND/13/FS/BAM/0017
Row 12	12	ND/13/FS/BAM/009	ND/13/FS/BAM/0045	ND/13/FS/BAM/006
Row 13	13	ND/13/FS/BAM/0036	ND/13/FS/BAM/0033	ND/13/FS/BAM/0015
Row 14	14	ND/13/FS/BAM/0038	ND/13/FS/BAM/0023	ND/13/FS/BAM/0041
Row 15	15	ND/13/FS/BAM/0044	ND/13/FS/BAM/0031	ND/13/FS/BAM/007
Row 16	16	ND/13/FS/BAM/0034	ND/13/FS/BAM/0047	
Row 17	17			

5. CONCLUSION

It can be concluded that employing this programme in any set of schools, it could reduce the level of examination malpractices. As no particular student that his/her number (Matric number or admission number) follows accordingly will seat next or adjacent with each other during the exam(s), as different seating arrangement can be generated for different examination.

REFERENCES

1. Nurani Aisha (2017). Examination malpractice. Causes, effect and solution of exammal practice. Retrieved from <https://michaelukpabi.wordpress.com/2017/12/05/examination-malpractice-causes-effect-and-solution-of-exammalpractice/>
2. Arnav A., Arpan L., Pravic S, G., and G. Panda, 2011. Development of an Automated Examination Seating Arrangement Generation System using Music Inspired Harmony Search Algorithm. 130: 301-309
3. Berlekamp, E. R, 1970. Factoring polynomials over large finite fields. Math. Comput. 24, RABIN, M. O. 1976. Probabilistic algorithms. In *Algorithms and Complexity, Recent Results and New Directions*, J.F. Traub, Ed., Academic Press, New York, 21-39.
4. Lekan Adeyemi. NAN. News24 (14:51, 1/5/2013)
5. Matsumoto, M. and T. Nishimura, 1998. Mersenne Twister: A 623-Dimensionally Equidistributed Uniform Pseudorandom Number Generator ACM Transactions on Modeling and Computer Simulation 1: 3-30.
6. Solovay, R. AND Strassen, V. 1977. A fast Monte-Carlo test for primality. *SIAM J. Comput.* 6, 1 (March), 84-85. See also *SIAM J. Comput.* 7, 1 (Feb.), 1978, 118.