HNG STAGE TWO TASK
Stage 2 Task: Flood prediction
Using all the data you can find,predict the likely data of the next flood in Lagos. Provide a detailed justification for your answer.
Submit your answer in a beautiful PDF

ANSWER
On handling this task, I found out the following:

- Quality rainfall data is obtained at NiMet
- Due to the limited time for the Stage 2 task, I obtained for data from research works on rainfall intensity duration frequency curves for Ikeja, Lagos.
- From the data obtained presented in the table below,, and following procedures in Hydrology texts, I came up with this rainfall idf relationship for Ikeja, Lagos.
  I = (103Td^6.7)/(t^0.55)
  From this relationship, the next very heavy capable of causing floods will be on 18th August, 2024.

Station	Duration	Return Period (T)						
		2 YEAR	5 YEAR	10 YEAR	20 YEAR	50 YEAR	100 YEAR	200 YEAR
	(Hours)	(mm/hr)	(mm/hr)	(mm/hr)	(mm/hr)	(mm/hr)	(mm/hr)	(mm/hr)
IKEJA	0.25 H	144.9716	220.8859	263.966	305.2083	358.5806	398.6467	438.4921
	0.5 H	86.65087	122.7144	146.6478	169.5602	199.2115	221.4704	243.6067
	0.75 H	63.54397	89.99054	107.5417	124.3441	146.0884	162.4116	178.6449
	1 H	51.99052	73.62863	87.98868	101.7361	119.5269	132.8822	146.164
	1.5 H	40.43707	57.26671	68.43564	79.12808	92.96535	103.3528	113.6831
	2 H	34.66035	49.08575	58.65912	67.82407	70.68459	88.58815	97.4427
	4 H	23.01664	32.59601	38.95332	45.03942	52.91555	58.82807	64.70804