Hackathon

Hackathon is an app and web development contest during Quark 2017. The apps can be developed in Java, Node.js, Python, Ruby, Bootstrap etc. The event will go on for 24 hours. A theme shall be provided as a base to build your hack. The theme would be provided on spot and the contestants would be given the freedom to choose whatever they wish to build, as long as it is related to the main theme. On the first day, the participants will be provided with the theme, guidelines and sufficient time would be allocated to plan the project. The judges will be available to clarify any doubts and questions regarding the event. On the second day, the teams will be expected to present their projects to the same judges, who will refer to the criteria (as mentioned below) to mark them.

Team Size: 4

Rules:

- You can code in language of your choice.
- Use of internet is allowed.
- Inter-team discussions are not allowed.
- If any one of the rules is broken, the entire team will be disqualified.
- Knowing to program on Android and making use of services like Google Maps on the Android app and Web app will be of advantage to your team.

Judging Criteria:

- Uniqueness and innovative skills.

- Potential and Sustainability.

CodeJam

Do you believe not just in writing code but making it more efficient? If yes, this event is for you.
Quark present to you a competitive programming event. Rack your brains to solve puzzles and real world problems. Compete with people all across the nation and show off your programming skills.

CodeJam will have 2 rounds exclusive of each other, and are individual events.
These rounds will be held on codechef.com

Round 1:
This is a teaser round for Quark CodeJam '17 and participants are welcome to attempt this optional round. This round will be hosted online on CodeChef for a duration
of 3 hours with 5 short problems. For any wrong submission (no test cases passed), a penalty of 10 mins will be imposed.

Round 2:
Anybody is allowed to sit for this, irrespective of their participation in the first round (optional). The contest will be hosted online on CodeChef for a duration of 5 hours with 8 problems. No team participation is allowed and plagiarism of any sort will result in cancellation of participation. For any wrong submission (none of the test cases passed), a penalty of 15 mins will be imposed.

quark
SHIFTING PARADIGMS

CodeJam

Judging Criteria for both the rounds:

Participants will be judged based on the number of test cases their program gives the correct answer for. Judging will be done via the online judge.

Team size: 1

Rules :

- You are required to print the final output. Sample output format will be provided in each problem statement.
- All the major programming languages are permitted.
- The participants will be judged on both correctness and time of submission of the solution.
- Use of internet, other than accessing Code chef, is prohibited.
- Any participants if found using any unfair means will be disqualified from the event.
- The decision of the organizers in declaring the results will be final. No queries in this regard will be entertained.

Bits CTF

Bits CTF is a computer security contest targeted at anyone with an interest in computer science. The game consists of a series of challenges where participants must reverse engineer, break, hack, decrypt, or do whatever it takes to solve them. The challenges are all set up with the intent of being hacked; making it a great way to get some hands-on experience. The objective of the game is for to gain as many points as possible by solving these challenges. This is a jeopardy-style CTF with multiple categories of challenges.

Duration: 36 hours.

Team Size: up to 4

Judging Criteria:

Participants will be judged on the cumulative points over the entire set of problems. In case of a tie, it will be sorted by adding cumulative time of all the solved questions.

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SHIFTING PARADIGMS

Bits CTF

Rules:

1. The competition is an online jeopardy style CTF with multiple categories of challenges, accessible from Internet which has a duration of 36 hours.

2. The competition can be played by individuals or groups (max team size of 4), only one account per team.

3. The participant must provide a real point of contact for future notifications or claim the prize.

4. Participants that behave inappropriately will be immediately disqualified, including:
   - Share solutions or hints.
   - Attack computers or applications not designated by the competition.
   - Attack other participants.
   - General bruteforce attacks over online platform.
   - Duplicated accounts.
   - Other things we consider to be unfair.

5. There is no need to use tools such as nmap, sqlmap, dirbuster, nikto, nessus, etc., each challenge is built to be solvable without those kind of tools.

6. Participants are ranked by score and speed.

Reverse Coding

This event will push your logical, deductive and mathematical skills to the limits. Be the Bond of programming and figure out what is the hidden source code by looking at its behavior on your inputs.

The participants will be provided a portal with a 'black box' function, and an input template. The participant can generate as many outputs on any desired input to guess what exactly the hidden source code is doing (e.g. calculating the nth Fibonacci number for every input n.) and code it. The portal will test your function on several test cases, and award a score accordingly. The score will vary depending on the difficulty level of the problem. The participants are responsible for bringing their own laptops and ensuring that they are sufficiently charged for a 3-hour event.

Judging Criteria:
Participants will be judged on the cumulative points over the entire set of problems. In case of a tie, it will be sorted by adding cumulative time of all the solved questions.

Rules:

- Almost all languages supported on Hackerrank are allowed.
- Any participants if found using any unfair means will be disqualified from the event.
- Each program will be tested based on our critical test data. However output and input should be exactly as specified in the samples provided.
- Internet connectivity, other than for accessing Hackerrank, is not allowed.
- The decision of the organizers in declaring the results will be final. No queries in this regard will be entertained.

Cryptic Enigma

Do you like breaking codes and solving ciphers?
Would you like the chance to use your mathematical and programming skills to win some great prizes?
Then the Cryptic Enigma Challenge is for you!

This is an interesting contest in the area of Cryptography hosted on Hackerrank. The participants shall use their deducing skills, cryptography and programming skills to decrypt a set of messages provided.

Duration: 3 hours.

Team Size: 2

Judging Criteria:

The team with the highest number of points at the end of the contest as given by the online judge wins. In case of a tie, time of submissions of the solution will be considered.

Cryptic Enigma

Rules and Regulations:

- **Important:** You are required to print the final output. Sample output format will be provided in each problem statement. All the major programming languages are permitted.

- Any of the previous problem's answer may be a hint for subsequent problems.

- Please do not discuss strategy, suggestions or tips in the comments during a live contest. Posting questions clarifying the problem statement is permitted. Discussing problems or any aspect of problem, on any other platform on web, on identification, will result in disqualification.

- If any kind of **plagiarism** if detected during or after the contest would immediately result in d**isqualification** for any kind of prizes.

- In the event of any dispute regarding the Rules, conduct, results and all other matters relating to the competition, the decision of the judge(s) shall be final and no correspondence or discussion shall be entered into.

NOTE: Use of **internet** is **allowed** during the contest.

Code – O – Shuffle

This is a competitive programming contest with a twist. The team will be allotted 4 different questions on 4 different terminals initially. The terminals will be rotated clockwise every 20 minutes. On qualification ,the teams would be given a bug solving type common question , i.e. the code will have syntax errors, runtime errors and logical errors and the team will to change the code accordingly and another competitive coding question to solve.

Scoring:

Shuffle round- all questions have the same weightage that is 100 points. Common round- The bug solving common question will have 150 points while 2nd common question will have 200 points.

Tie Breaker:

The team, which took the minimum time to solve the questions, will be declared winner.

Time: 3 hours

Team Size: 4

Code – O – Shuffle

Rules and Regulations:

- Team members can't interact with each other during this 100 minute (20 min*5) period.
- Teams who will get at least 25% points from first 4 questions will be allowed to attempt the 1st common question(bug solving) and teams who will get at least 50% points will be allowed to attempt both common question.
- Discussing Code Chef's problems or any aspect of problem, on any other platform on web, on identification, could lead to disabling of respective account and banning from the community.
- Almost all languages supported on Code Chef are allowed.
- Each program will be tested based on our critical test data. However output and input should be exactly as specified in the samples provided
- Any participant found to be indulging in any form of malpractice will be immediately disqualified.
- The total time is the sum of the time consumed for each problem solved. The time consumed for a solved problem is the time elapsed from the beginning of the contest to the submission of the first accepted run plus 20 penalty minutes for every previously rejected run for that problem(Wrong answer, Time limit exceeded, Runtime Error, Compilation Error). There is no time consumed for a problem that is not solved.
- The decision of the organizers in declaring the results will be final. No queries in this regard will be entertained.