GAME OF CODES

SURPRISE EVENT

The Turing Fraternity is the computer science club of Jayshree Periwal International School, which is named after Mr. Alan Turing a man known for his deciphering skills. His life was full of surprises, from being recruited to MI6 to cracking Nazi codes, his cryptic game was always strong. Commemorating Sir Alan Turing's contribution to the field of cryptography, the Turing Fraternity has put up tasks to test your cryptic game.

Can you crack the enigma?

Instructions

1. **The surprise event is a cryptic hunt and is a team event. All the participants from one school will work together as a ciphers to crack the enigma by solving the 10 tasks.**
2. **Each task accounts for equal points. Tasks can be sent in any order.**
3. **Submissions for tasks are to be emailed to turingfraternity@gmail.com**
4. **A submissions can be in the form of a picture, text or an attachment. Most of the answers can also be obtained by the application of 'jugaad'.**
5. **For a submission to be accepted, the email should include – a subject in the format [Name of School – Task number] followed by the solution to the task in the body text or as an attachment.**
6. **After the cipher (you) sends the solution to a task, an acknowledgement email will be sent informing the cipher about the nature of their response: correct/incorrect.**
7. **The first team to submit a correct response to a particular task gets 30 points, the second – 20, third and the teams that'll follow will be awarded with 10 points each.**
8. **The team, which scores the maximum number of points by day 2 wins.**
9. **For any other queries regarding the cryptic hunt, you could reach us at help@turingf.org or call us at +91 9929522510**
10. **The participants are allowed to work on the surprise event at Jayshree Periwal International School on Day 2(30 July) in ICT LAB 1 located on the ground floor.**
    We start accepting submissions, the time you see this; the Deadline for all submission is 11:45 AM 30th July.

Task One

Decrypt the following text:

T fxfuxk hy max Vhfinmxk Vetg hy Ctrlakxx Ixkbpte Bgmxkgtmbhgte

Hint: A classical cypher has been applied

Submission Info: Take a picture of what you decipher when you reach JPIS campus on the second day, or you may apply 'juggad.'

TASK 2

Sometimes when you run the Caesar cipher, one English word becomes another. For example, "COLD " becomes "FROG " if we shift everything to the right by 3. In this case we say that the shift key is 3. Figure out which word each of the following can be encrypted to. Pick any three parts for your problem set.

(a) ARENA
(b) DAZED

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply ‘juggad.’

TASK 3

DECRYPT THE FOLLOWING MESSAGE

FTEICIIBNONNATUDTDORIHMNT

HINT: A classical cypher

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply ‘juggad.’

TASK 4

Linguistic Constraints

ディズニーランド

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply ‘juggad.’

TASK 5

Find the last 2 digits of the following, which will lead you to a classroom.

2^{2016}

3^{2016}

HINT: Fibonacci sequence and given that A=1

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply 'juggad.'

TASK 6

Decipher this apparent alien language and get a picture of what it reveals

HINT: William Gates

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply 'juggad.'

TASK 7

Decipher the following cipher text encrypted with a World War cipher

BWXG CVDX HNNL BDMW WZSB BOET RFWF FLUH SSCP ZCEP WRMC BCEC PMFV PGSD SKTL EURI WJTJ XSKI RMDB EYTS JGTW T

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply 'juggad.'

TASK 8

Find the location

00110010 00110110 11000010 10110000 00110100 00111001 00100111 00110011 00111000 00101110 00110001 00100010 01001110 00100000 00110111 00110101 11000010 10110000 00110011 00111001 00100111 00110101 00110111 00101110 00110101 00100010 01000101

HINT: Explorer

Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply 'juggad.'

TASK 9

Decrypt this Internet language:

065 116 032 097 032 112 097 114 116 121 044 032 101 118 101 114 121 111 110 101 032 115 104 111 111 107 032 104 097 110 100 115 032 119 105 116 104 032 101 118 101 114 121 098 111 100 121 032 101 108 115 101 046 032 084 104 101 114 101 032 119 101 114 101 032 054 054 032 104 097 110 100 115 104 097 107 101 115 046 032 072 111 119 032 109 097 110 121 032 112 101 111 112 108 101 032 119 101 114 101 032 097 116 032 116 104 101 032 112 097 114 116 121 063 032

Submission Info: The answer

TASK 10

Bob wishes to send Alice a message encrypted with ElGamal encryption. They decide to use p = 73 and g = 5. Alice picks some 'a' and computes the public key g^a = 49 mod p. Bob chooses a random key k = 33 and wishes to send the message m = 62. What is the cipher text he sends?

HINT- Diffie Hellman key exchange

Submission Info: The answer

TASK 11

S.O.S !

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Submission Info: Take a picture of what you decipher probably only when you reach JPIS campus on the second day, or you may apply 'juggad.'