1)Sanity Check:

-Open Discord server and go to general channel

-The channel topic has the flag in it - actf{always\_gonna\_give\_you\_up}

2)Archaic:

* Unzip the given archived file using:

tar -zxvftar -zxvf /problems/2021/archaic/archive.tar.gz

* ls files extracted we will get – flag.txt
* To access this file we will need to be granted permission using command:

chmod 744 flag.txt

* Then use: cat flag.txt

To get: actf{thou\_hast\_uncovered\_ye\_ol\_fleg}

3)Exclusive cipher:

* Using Xor cipher online decoder, just enter the encoded ciphertext.
* change the key to 5 bytes

4) Fish:

* Open the fish.png in the terminal using:

wget <https://files.actf.co/4665ad469663cc5471232826797a19b9eb315255c8246f5a0ce7257d7ca88947/fish.png>

* Then use eog fish.png to open the file
* After this use the command:

Java -jar stegsolve.jar

* Analyse the image using this tool and you will find the flag in the colour inverted image

5)Survey:

* Fill the survey to get the flag