ASGAMA KOMATIK

CTF 25

BAYU PUTRA IBANA

24/536830/PA/22776

ASGAMA Questions

1. Forensics

Nama
LOGO_ASGAMA.zip

In the Forensics folder, there is a zip file, first i will download it.
Once done, I tried to unzip it:

```
┌──(kali㉿kali)-[~/Downloads]
└─$ unzip LOGO_ASGAMA.zip
```

```
┌──(kali㉿kali)-[~/Downloads]
└─$ unzip LOGO_ASGAMA.zip
Archive:  LOGO_ASGAMA.zip
[LOGO_ASGAMA.zip] LOGO_ASGAMA.png password:
```

Turns out you need a password for it.
Let's analyze the file using exiftool:

```
┌──(kali㉿kali)-[~/Downloads]
└─$ exiftool LOGO_ASGAMA.zip
ExifTool Version Number         : 12.76
File Name                       : LOGO_ASGAMA.zip
Directory                       : .
File Size                       : 327 kB
File Modification Date/Time     : 2024:11:19 03:19:48-05:00
File Access Date/Time           : 2024:11:19 03:20:50-05:00
File Inode Change Date/Time     : 2024:11:19 03:19:48-05:00
File Permissions                : -rw-rw-r--
File Type                       : ZIP
File Type Extension             : zip
MIME Type                       : application/zip
Zip Required Version            : 20
Zip Bit Flag                    : 0×0001
Zip Compression                 : Deflated
Zip Modify Date                 : 2024:11:15 22:01:56
Zip CRC                         : 0×2f40304c
Zip Compressed Size             : 327092
Zip Uncompressed Size           : 330738
Zip File Name                   : LOGO_ASGAMA.png
```

There is a png there, but still no other info.

Maybe we have to guess, or crack the password.
I decided to use **JohnTheRipper**.

```
┌──(kali㉿kali)-[~/Downloads]
└─$ zip2john LOGO_ASGAMA.zip > hash.txt
Created directory: /home/kali/.john
ver 2.0 LOGO_ASGAMA.zip/LOGO_ASGAMA.png PKZIP Encr: cmplen=327092, decmplen=330738, crc=2F40304C ts=B03C cs=2f40 type=8
```

First extract the hash using zip2john to a text file.
Then use the rockyou.txt, which is a text file containing passwords, and john will crack it.

```
┌──(kali㉿kali)-[~/Downloads]
└─$ john --wordlist=rockyou.txt hash.txt

Using default input encoding: UTF-8
Loaded 1 password hash (PKZIP [32/64])
No password hashes left to crack (see FAQ)
```

Then use john –show to show the cracked password

```
┌──(kali㉿kali)-[~/Downloads]
└─$ john --show hash.txt
LOGO_ASGAMA.zip/LOGO_ASGAMA.png:popsicles:LOGO_ASGAMA.png:LOGO_ASGAMA.zip::LOGO_ASGAMA.zip

1 password hash cracked, 0 left
```

It says : popsicles, let’s try that

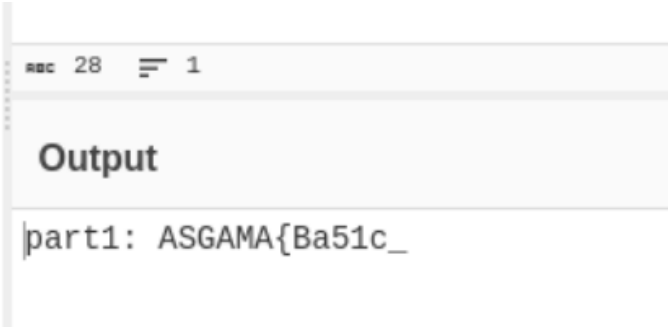
```
┌──(kali㉿kali)-[~/Downloads]
└─$ unzip LOGO_ASGAMA.zip
Archive:  LOGO_ASGAMA.zip
[LOGO_ASGAMA.zip] LOGO_ASGAMA.png password:
  inflating: LOGO_ASGAMA.png
```

It works, now we analyze the png file to see if the flag is there.

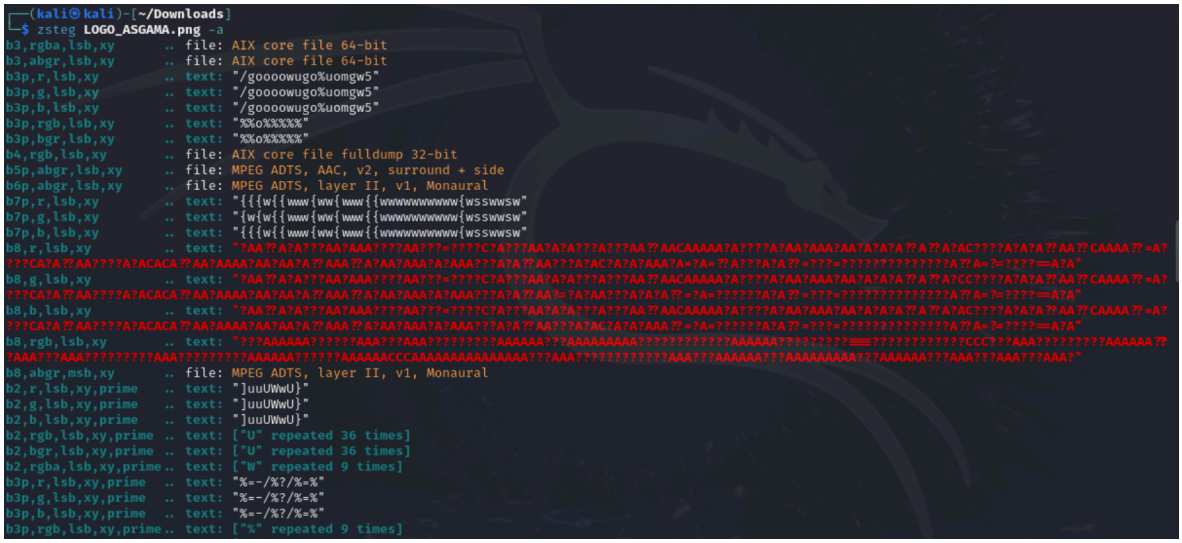
```
┌──(kali㉿kali)-[~/Downloads]
└─$ exiftool LOGO_ASGAMA.png
ExifTool Version Number         : 12.76
File Name                       : LOGO_ASGAMA.png
Directory                       : .
File Size                       : 331 kB
File Modification Date/Time     : 2024:11:15 22:01:56-05:00
File Access Date/Time           : 2024:11:19 03:58:32-05:00
File Inode Change Date/Time     : 2024:11:19 03:58:31-05:00
File Permissions                : -rw-rw-r--
File Type                       : PNG
File Type Extension             : png
MIME Type                       : image/png
Image Width                     : 962
Image Height                    : 948
Bit Depth                       : 8
Color Type                      : RGB with Alpha
Compression                     : Deflate/Inflate
Filter                          : Adaptive
Interlace                       : Noninterlaced
SRGB Rendering                  : Perceptual
Warning                         : [minor] Text/EXIF chunk(s) found after PNG IDAT (may be ignored by some readers)
Exif Byte Order                 : Big-endian (Motorola, MM)
X Resolution                    : 72
Y Resolution                    : 72
Resolution Unit                 : inches
Y Cb Cr Positioning             : Centered
Exif Version                    : 0232
Components Configuration        : Y, Cb, Cr, -
User Comment                    : cGFydDE6IEFTR0FNQXtCYTUxY18K
Flashpix Version                : 0100
Color Space                     : Uncalibrated
Image Size                      : 962×948
Megapixels                      : 0.912
```

There is a comment for the user, I think that can be decoded.

I used cyberchef to decode it, I tried from Base64 first and got it correct:



Turns out it is only 1 part of the flag: **ASGAMA{Ba51c_**
Now we have to find the other parts of the flag.
I tried to use other tools to see if i can extract any other hidden data, such as **zsteg**

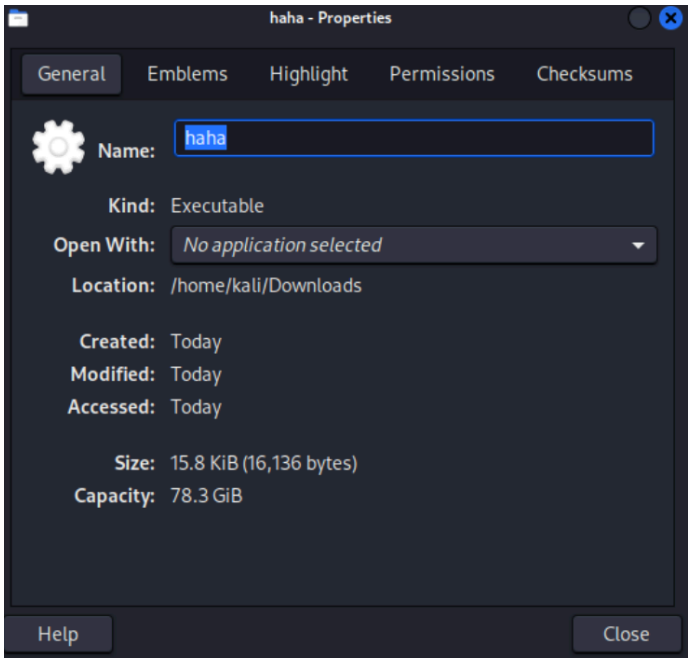


But I didn't find anything.
Then next I uploaded the image to Aperi'Solve to look for other clues.
Then I stumbled on the 2nd part of the flag, which completes it.

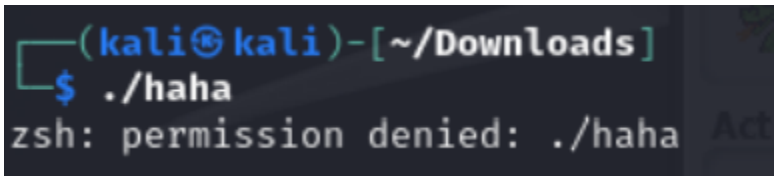
So the full flag is : **ASGAMA{Ba51c_ F0r3n51c5}**

2. haha

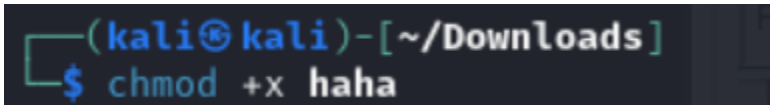
In the Reverse Engineering file, we can download a file , haha.



It is an executable file, so I tried running it.



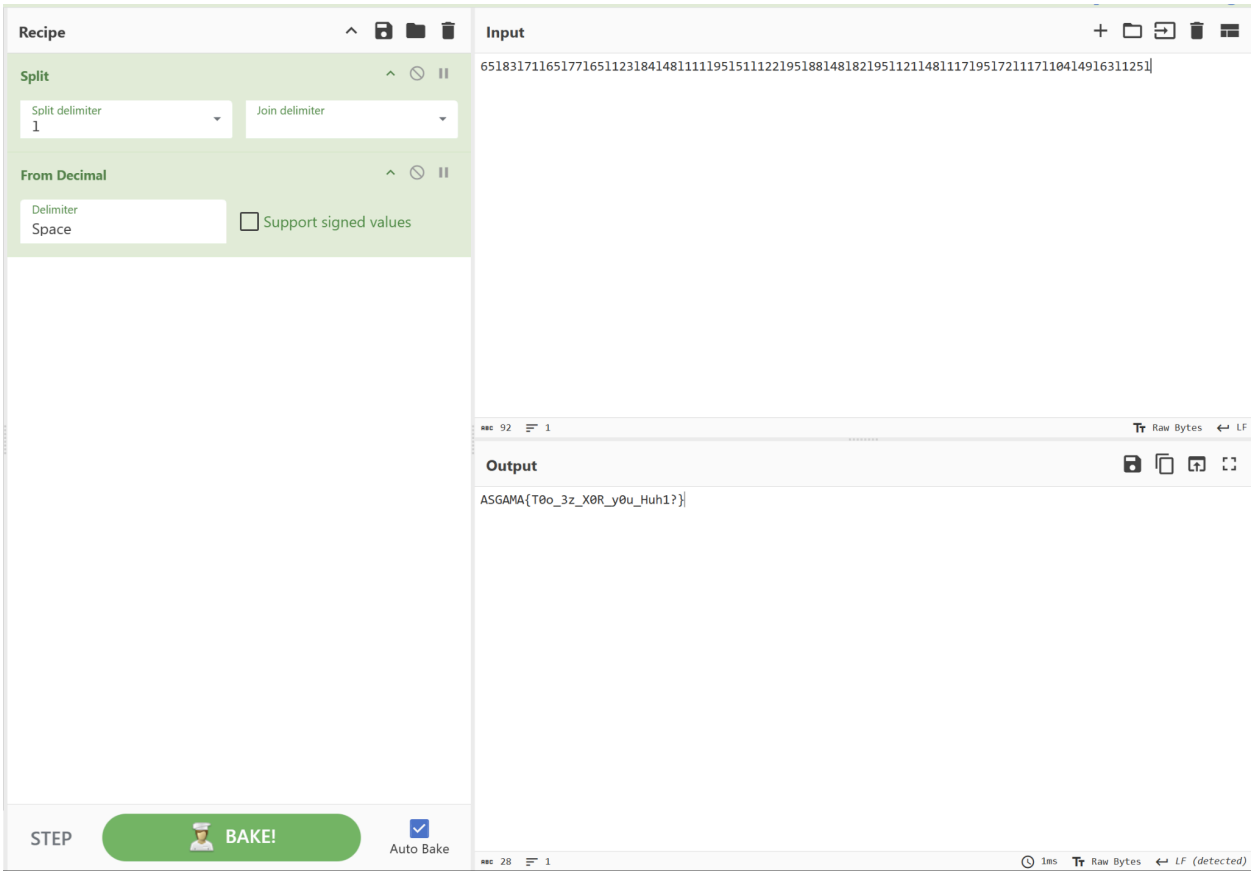
Since the permission is denied, I figured out that you need to give it executable permissions.



Then, I ran the program file.

We get a huge number, maybe this can be decoded.

After trying a few decodes, like Base64 or XOR, and other ciphers, but I did not find the flag. However i noticed that there is a ‘1’ separating the numbers, by removing that maybe i can decode it into ASCII using from decimal,
So in cyberchef there is a ‘split’ that you can use to remove the delimiter of ‘1’ and then combine the recipe with From Decimal to decode it.



There you go, we found the flag:

ASGAMA{T0o_3z_X0R_y0u_Huh1?}