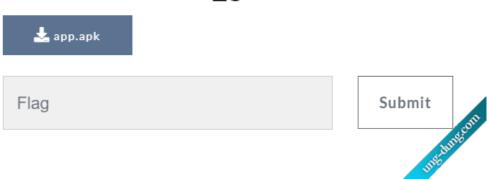
## **Android RE (25 Point)**

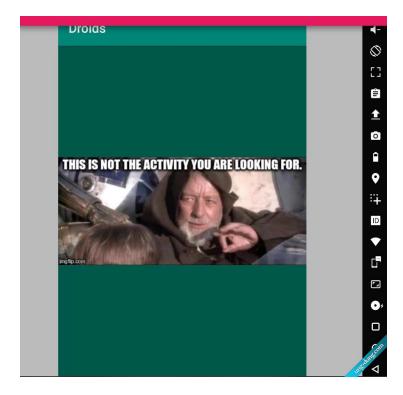
Tải file app.apk

## android 25



Cài phần mềm giả lập android ví dụ: LDPlayer

Cài đặt app.apk đó lên trình giả lập đó



Ta thấy đây là một hình ảnh với nội dung thông báo là "**This is not the active....**" --> Bí ẩn nằm trong tấm ảnh này chúng ta cần giải mã Cài đặt công cụ apktool trên

kali <a href="https://ibotpeaches.github.io/Apktool/install/">https://ibotpeaches.github.io/Apktool/install/</a> Chay công cụ apktool để giải mã file app.apk

```
root@ThangMT:~/Desktop# apktool d app.apk
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
I: Using Apktool 2.4.1 on app.apk
I: Loading resource table ...
I: Decoding AndroidManifest.xml with resources ...
I: Loading resource table from file: /root/.local/share/apktool/framework/1.apk
I: Regular manifest package ...
I: Decoding file-resources ...
I: Decoding values */* XMLs ...
I: Baksmaling classes.dex ...
I: Copying assets and libs ...
I: Copying unknown files ...
I: Copying original files ...
root@ThangMT:~/Desktop#
```

Vào thư mục app vừa giải mã, chúng ta sẽ quan tâm đến thư mục **smali** nơi chứa thông tin về đoạn code chương trình để gọi đến file tài nguyên(theo ý hiểu của mình).

```
root@ThangMT:~/Desktop# cd app/
root@ThangMT:~/Desktop/app# ls
AndroidManifest.xml apktool.yml original res
root@ThangMT:~/Desktop/app#
```

Tiếp theo đó vào thư mục **com/example/blink/** nơi có chứa thông tin mà chúng ta cần tìm. Bạn chạy lệnh tìm kiếm :

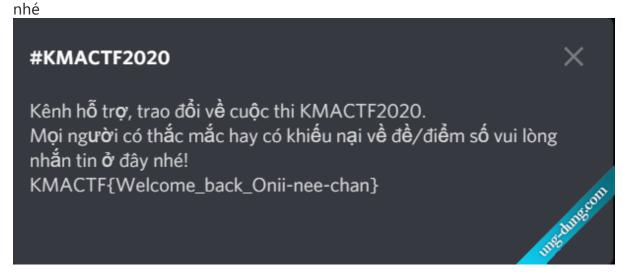
```
``` cat * | grep -i "ctf" ```
```

```
BuildConfig.smali
  'R$color.smali
  'R$style.smali'
 MainActivity.smali
   'R$string.smali'
'R$styleable.smali'
   'R$integer.smali
 R$animator.smali'
                                  'R$bool.smali'
  'R$drawable.smali'
  'R$layout.smali
AAAAAAAAAAPKZXNjAAAA/AAAAF5jcHJ0AAABXAAAAAt3dHB0AAABaAAAABRia3B0AAABFAAAABRyWFlaAAABRAAAARRWFlaAAABRAWFlaAAABRiWFlaAAABRiWFl
gAAAZMAAAKKWFLaIAAAAAAAAG+iAAA49QAAA5BYWVogAAAAAAAAYpkAALeFAAAY2lhZWiAAAAAAAAAAAAAAD4QAALbPY3VydgAAAAAAAAAAAAAA
 ghrC/YQPxVRGzQh8SmQMhg7kkYFUXdd7WtwegWJsZp8rGm/fdPD6TD////gABBKRklGAAEBAABAAEAAP/tADZQaG90b3Nob3AgMy4wADhCSU0EBAAA
GRwCZwAUODlDRXoyeXc1VWxwdDBKS1BmZTQA//4AFUtNQUNURntibGlua19ibGlua33/2wBDAAkJCQkKCQoMDAoPEA4QDxUUEhIUFSAXGRcZFyAxHyQ
      w1KygrNSx0PTc3PU5aTEhMWm5iYm6Kg4q0tPL/2wBDAQkJCQkKCQoMDAoPEA4QDxUUEhIUFSAXGRcZFyAxHyQfHyQfMSw1KygrNSx0F
m5iYm6Kg4q0tPL/wgARCAJVA8ADAREAAhEBAXEB/8QAGwAAAgMBAQEAAAAAAAAAAAAAAACEAwQFBgf/xAAaAQEBAQEBAQEAAAAAAAAAAAAAAQIDBAUC
DAMBAAIQAXAAAAHh+H1SiGoqs56szVpG5F2az1+maZaiEsVAgGAqBjgGAUDsYDCCkMYDGMAQAYX0E0ZIgsCIhFaxEIiIZBXCI0gCI1dmgAAgAaAAAA
    SIQhERAXRYKAAACAKhCAVmXOmCFSxZLPKG5XqdLpn0G+eSazyiyxEpAFEAUDAYwCmjAYCGAwGMEAAaiYqZfUk0JIzlSzlosĭKbbYkk
lCBIiRhqChiEAhgIZIkgQVAIBCEAhCIiIiEVmRGs4BWSgqXPUolKDlnkyGpDU6fTPoOvÓEZJrNNRhUQhqAAAA7GMYDGgAAMYDAAAYAIrqilbNKMzrUsY
IkRAuAppFhWCRWZAkVFpSRJlC3RXUBjNcgAKBCJE0RUqEKWIhChCWJEQiJERUYIQEbABJ0005SsCWbKI6jFXR7Y7XTmypcs1XCVAABAFAQ6aMAHTGADA
EFaBIBhUkus2IGVc8sFQhEiIWEWAsCumA4VIQDBIrJIrGGFEItJAAABJLSyyEUrBUIQERSoQiIoiREIqXkYoKkAgN/LTJRElEgJSkbvTz37zIiVkJUJQ
wAYwQpjAYwGAwAYIxjGOhGTLbNSSrLLREVQgGAgAQAAAAAOgAABQAIQxgIAGTs0liULRLWISoBCEKEIIsRCERji8dg6hZEKRs56nlLNjqMnASlR0PRz
iKqEISoQDAAGMApjIJCmTiNMIdTABkUsAkMmhV6XgUEFREQStCgUCiAAAAIYAAUAEAUAAAAAMml5IpKiKqEAhAISoRERGEIRxOHRDI0kSqtnKyiUKmMI
GOJŹsa6Ht5XWAgIqCABCGZdŠqzfjSLIKBpIAAKBjGNAÝyVMYxoxkgAREBCEACBVAAAIBBQAAMBCAAABCESIkxgBegRAirSKoQFhIURERFBSjjefp,
sib+OixkatzRAY83pe7lOxARASgo4mfdYzW10teXmXdfXyM7XLfD7Z9Fx01kjAACgYxoy16ZIYEkmAxkhCAQgABAIBAJVAAAFAAjlKQkakACORqQl
AQAAgETQOQliAjjebpWSxatIhYVu4aWpHUUt/OlipxKXp+/iwAQhKCOFz9+jXLPOtU6W9fHdvy8VfGHc7vLerJjAYBTGjGMrTVYQJEwAVSAAMFAAJ
AQAAgETQOQliAjjebpWSxatIhYVu4aWpHUUt/OlipxKXp+/iwAQhKCOFz9+jXLPOtU6W9fHdvy8VfGHc7vLerJjAYBTGjGMrTVYQJEwAVSAAMFQV
ZEIAIiUEAQ6AQAAEAFdzCyUts0wAAAAABAIYgVAiEORhCIIBeRw3RjUorI0W0zXw2WLUUujlosjoWBIvbyBABEBKGGdb7zqasZh5ZybmnN1RXWrJj
GMhSACSWkSwQDGACoACREZOEACIIEEoFgMAAAAo1nDvlC5umtONyWyanKAAgOT2mHpN3NqxrXgCAAEIQlIREiIDlcembnqeVNFJFWvlWMRZmzyWle
mAAIjAQXEQBWCSIkhjJDORjAYDGFMYwRjJDGAXgAUAACA8QAIREQAAAMAAAK9ZrsIkADW2U1AEVVTp5X28416bx738qqDL5ur1H6OTlQiIiQpZQhH
zlr0iiEacWcTiC2ZShaQ3Hqdb1cwRz7ZpJYEC4qLSBUSNMU0wGXpSaBU5LKoILfJqCmZQJEiJJJkwJDJkAoJgRLkqJkCKyJwxEQEAAADAAAEB0oox
OVMQiNcftOH6c7ubt+bWrFQUQAQpCIigUhCEc7lvJx0Sx1IiEt+LKJSK2eVW5OWUHXPY9PMApKqQEiKykgpUgJRAmgSqwgTSwYqRIsgpjGCMZAm
  JgACIiVjAIiAhgIQAMAABSIzVeNKWWs27xZYgEAjyXtzdHR4308r0EAAAGfGqeetXbAREIiBz+W8PDbiökbāgauVksdx55lWoQqu3Op6eYIB
```

copy đoạn code đó và sử dụng trình base64 decode Kết quả: \*\***KMACTF{blink blink}**\*\*

## Hello\_KMA (5 point)

Đăng ký tài khoản trên trang decord: <a href="https://discord.gg/2QeBsgt">https://discord.gg/2QeBsgt</a> Nó ở ngay trên đầu



## Miku (20 point)

Kiểm tra mã nguồn trang vào mục Application (f12)

