### **Given a password and a person’s info**

We first extract a dictionary from that person’s info

This dictionary of substring will be check if it exist in password to transform password into a mask

### **Name**

|  |  |  |  |
| --- | --- | --- | --- |
| **Label** | **Description** | **Generated String** | **Example Output** |
| **N** | **Full name without spaces** | tmp[1] **-** ZhangSanChuan | **"ZhangSanChuan"** |
| **a** | **Secondary identifier followed by the first name** | tmp[2] **+** name\_str[0] | **"SanChuanZhang"** “MinhNguyenNhat” |
| **b** | **Short form identifier (initials)** | tmp[0] | **"ZSC"** |
| **c** | **Secondary identifier** | tmp[2] | **"SanChuan"** |
| **d** | **First word only** | name\_str[0] | **"Zhang"** |
| **f** | **Initials after the first, followed by first word** | tmp[4] **+** name\_str[0] | **"SCZhang"** |
| **g** | **First word followed by the initials after the first** | name\_str[0] **+** tmp[4] | **"ZhangSC"** |

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### **Birth Processing Rules**

Birthday must have 8 chars (ex:19940206)

Code:

        all\_dict['O'] = birth[4:6]

        all\_dict['Q'] = birth[6:8]

        all\_dict['R'] = birth[0:4]

        all\_dict['F'] = birth [2:4]

        if birth[4] == '0' and birth[6] != '0':

            all\_dict['H'] = birth [5:6] + birth[0:4]

            all\_dict['I'] = birth [5:6] + birth[2:4]

            all\_dict['J'] = birth [5:6] + birth[6:8]

        if birth[4] != '0' and birth[6] == '0':

            all\_dict['K'] = birth [7:8] + birth[0:4]

            all\_dict['Y'] = birth [7:8] + birth[2:4]

            all\_dict['Z'] = birth [7:8] + birth[4:6]

        if birth[4] == '0' and birth[6] == '0':

            all\_dict['M'] = birth [7:8] + birth[5:6]

Given birth: 19940206

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Condition** | **Description** | **Generated String** | **Example Output** |
| O |  | month | 02 |  |
| Q |  | date | 06 |  |
| R |  | Year | 1994 |  |
| F |  | Year (last 2 digit) | 94 |  |

|  |  |  |
| --- | --- | --- |
| Month have prefix ‘0’  Date don’t have prefix ‘0’ | Month don’t have prefix ‘0’  Date have prefix ‘0’ | Month have prefix ‘0’  Date have prefix ‘0’ |
| H -> month + year | K -> date + year | M -> month + date |
| I -> month + year-last-2-digits | Y -> date + year-last-2-digits |
| J -> month + date | Z -> date + month |

### **Email Processing Rules**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Condition** | **Description** | **Generated String** | **Example Output** |
| E | None | Email prefix before the '@' symbol |  | "manhtech123" (from “manhtech123@gmail.com”) |
| s | Prefix contains digits (only first found string) | Extracts consecutive digits from the start of the prefix |  | "123" (from "123abc@example.com") |
| t | Prefix contains letters (only first found string) | Extracts consecutive letters from the start of the prefix |  | "abc" (from "abc123@example.com") |

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### **Account Processing Rules**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Condition** | **Description** | **Generated String** | **Example Output** |
| A | None | the entire account string | account | "user123" |
| u | Account starts with digits (only first found string) | Extracts consecutive digits from the start of the account | acc\_d | "123" (from "123user") |
| v | Account starts with letters (only first found string) | Extracts consecutive letters from the start of the account | acc\_l | "user" (from "user123") |

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### **GID Processing Rules**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Condition** | **Description** | **Generated String** | **Example Output** |
| G | None | Processes the entire gid string | gid | "ABCDEFGH0123456789" |
| w | None | Extracts the last 4 characters of the gid |  | "6789" |

### **Phone Processing Rules**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Condition** | **Description** | **Generated String** | **Example Output** |
| C | None | Processes the entire phone number string | phone | "0989993089" |