Experiment No.3

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Finding area according to PINCODE

1.Research:

- Matching the area according to the PIN code is important because it ensures accurate, efficient, and timely delivery of mail, parcels, and logistics services. The PIN code system acts as a unique numerical identifier that overcomes challenges such as similar place names, language barriers, and illegible handwriting.
- Geographical Identification: Each digit in the PIN code provides a hierarchical geographical breakdown, from the national region to the specific post office:
    - First digit: Identifies the postal region (e.g., North, South, East, West).
    - Second digit: Denotes the sub-region or state.
    - Third digit: Indicates the sorting district.
    - Last three digits: Represent the specific delivery post office within that district.

2.Analysis:

Key Reasons for Matching Area and PIN Code:

- Eliminating Confusion: Many cities, towns, or streets may have identical or very similar names across the country. A specific six-digit PIN code acts as a unique identifier for a small, defined geographical area and its associated post office, removing ambiguity.
- Logistics and E-commerce: In modern logistics and e-commerce, the PIN code is crucial for verifying service areas, estimating delivery timelines, assigning delivery partners, and planning efficient transportation routes. Many online sellers cannot ship to a location if the PIN code is not serviceable by their courier partners.
- Resource Allocation: Businesses use PIN code data for geomarketing, sales territory identification, and service planning, as it provides a reliable basis for geographical analysis and resource allocation.

3.Ideate:

Pincode and area should be matched accordingly. So that we can avoid any inconvenience.

- Efficiency and Speed: Correctly matching the area to the PIN code allows for a streamlined logistics process, enabling timely delivery. An incorrect or missing PIN code can cause significant delays (sometimes weeks) as the item is sent to the wrong sorting facility and must then be re-routed.

We will build a program to find the area by using pincode.

4.Build:

```
// Online C compiler to run C program online
#include <stdio.h>
#include <string.h>

int main() {
    // Write C code here
    int i,j,pincode;
    int pin[5]={411014,411032,411038,411052,411004};
  char
loc[5][30]={"VimanNagar","PuneAirport","Kothrud","Karvenagar","Deccan"};
    int found=0;
    printf("Enter the pincode:");
    scanf("%d",&pincode);

for(i=0;i<5;i++){

    if(pincode==pin[i]){
        printf("Pincode: %d\n",pin[i]);
        printf("Area: %s\n",loc[i]);
        printf("Pincode is found.\n");
        found++;
        break;
        }
    }
    if(found==0)
    {
        printf("Pincode not found.");

    }

        return 0;
```

```
}
```

5.Test:

1)For valid case:

```
Enter the pincode:411014
Pincode: 411014
Area: Viman Nagar
Pincode is found.
```

2)For invalid case:

```
Enter the pincode:416210
Pincode not found.
```

6.Implementation:

In essence, the implementation of area-to-pincode matching is a foundational element for modern, efficient, and data-driven operations across a wide range of industries and public services.

Here, we have checked the pincode and if it is matching with any pincode in the directory then the particular area matching with that pincode will be displayed.

Reference:

https://pincodeguru.com/blog/view_post.php?id=8

Github link:

https://github.com/AditiChougale1808/Finding-area.git