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**SCHOOL OF COMPUTER SCIENCE AND ENGINEERING**

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# *International Trade Market*

## A Project Report

## Under the Guidance of,

## Prof. A.Srivani

**By**

19MID0124 – Valliammai.V
19MID0093 – Karjala Sandhya
19MID0094 – Selva.T

## DECLARATION BY THE CANDIDATE

We hereby declare that the project report entitled **"INTERNATIONAL TRADE MARKET"** submitted by us to VIT University ,Vellore in partial fulfillment of the requirement for the award of the degree of **Integrated M.Tech CSE with Specialization in Data Science** is a record of J- component of project work carried out by us under the guidance of **Prof. A.Srivani** . We further declare that the work reported in this project has not been submitted and will not be submitted, either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university.

Place: VIT University, Vellore
Date :

Signature of the faculty Signature of the Candidate

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# 1. INTRODUCTION

## 1.1 Abstract

» Exporting and importing helps grow national economies and expands the global market. Every country is endowed with certain advantages in resources and skills.

» For example, some countries are rich in natural resources, such as fossil fuels, timber, fertile soil or precious metals and minerals, while other countries have shortages of many of these resources. Additionally, some countries have highly developed infrastructures, educational systems and capital markets that permit them to engage in complex manufacturing and technological innovations, while many countries do not.

» Imports are important for businesses and individual consumers. Countries like Ellen's often need to import goods that are either not readily available domestically or are available cheaper overseas.

» Individual consumers also benefit from the locally produced products with imported components as well as other products that are imported into the country. Oftentimes, imported products provide a better price or more choices to consumers, which helps increase their standard of living.

» Countries want to be net exporters rather than net importers. Importing is not necessarily a bad thing because it gives us access to important resources and products not otherwise available or at a cheaper cost.

» On the other hand, the more a country exports, the more domestic economic activity is occurring. More exports means more production, jobs and revenue. If a country is a net exporter, its gross domestic product increases, which is the total value of the finished goods and services it produces in a given period of time. In other words, net exports increase the wealth of a country.

# 2.OVERVIEW AND PLANNING

## 2.1 Proposed Work

» The key idea for design and implementation of an operational import and export management information system is presented.

» Here , the system gets input of Countries domain . It also get data of availability of each domain and needed for each domain so that it can categories the domain as import or export so that they may not be time lack to take decision which to import first

**Market Prediction**

» Training this model is our own choice on any chosen country's trade market shares data as well as other optional domain data points. They can be the sentiment from various sources in which few are twitter ,trends in Google,headlines in news,official websites of particular company etc..,

## 2.2 Hardware Requirements

Mouse and Keyboard to enter input and process the require output

## 2.3 Software Requirements

Code Block

## 3. LITERATURE SURVEY AND REVIEW

### 3.1 Literature Summary

The First dot of a project was initiated by brainstorming of various topics and finally decided trade market and we started organizing from where to start and how to implement . Through the journey to develop our Project we carried through numerable number of journals and blogs . Few important ones are

1. Cybex solutions

http://www.cybex.in/landingpage/index.php?utm_source=Google-Searchearch&utm_medium=cpc&utm_campaign=Exim&gclid=CjwKCAjw5Ij2BRBdEiwA0Frc9bJaF3i_uw0S50OReolglKyDzrCkQr2FzZNtco7u6B_XL4QceawCHhoCo68QAvD_BwE

Our major Initial idea generation and motivation is to build came from cyber solutions. Which emphasis us to do more work on our project and to accomplish it.

2. Geniusimpex

https://geniusimpex.org/procedure-of-import-and-export/

Such a eye-opener for us. This is like a "Black pearl" which made us to learn effective marketing plan to build import and export system.

Which makes us to build a project and cleared our major setbacks and fixed our goal towards the whole-sale business buyers.

Helps us to understand the greater insight and complete background flow-chart of import-export system . which made us to clearly point-out and

cleared our questions like,''how to implement our project?''. which is a major success.

3. Shodhganga

http://shodhganga.inflibnet.ac.in/jspui/bitstream/10603/152748/8/07_chapter%202.pdf

» This particular pdf made us to understand finanacial background of doing trade particularly import-export

» Financial services

Major domestic, foreign and international banks provide a wide range of services to their customers involved in import and export operations.

These services fall in to four main categories.

1. Financial services,
2. Handling export documents,
3. Non-financial services
4. Foreign exchange operations, etc..,
5. Financing is the core service provided by the banking sector to the exporters. It was strongly believed that the most effective incentive to exporters would be in the form of cheaper and more wide spread credit availability

# 4.METHODOLOGY

## 4.1 Methodology Used

1. We have done this project in c language

2. Generally we will use linked list as it is very flexible, dynamic structure in which elements can be added or removed easily

3. Here, new space is allocated for each entry of new node by the variable “Temp”

4. We will also use sorting techniques based on the unit of excess or deficient in that domain

5. We also used search operation to find importer

6. Here we will define a structure

Domain structure holds the dom(domain name) , data(excess/limited amount), next(to hold the address of the next link)

```
struct Domain
{
   char dom[50];
   float data;
   struct Domain *next;
}
```

Country structure holds the cou(country name) ,expo(to hold the link-list of all the exporting domain) ,impo(to hold the link-list of all the importing domain), next(to hold the link)

```
struct country
{
   char cou[50];
   struct Domain *impo;
   struct Domain *expo;
   struct country *next;
}*head;
```

7.Here we will use the conditional statements like

1. If else
2. Switch
3. while

8.Functions used in this projects are

Function used for inserting domains in descending order

void sortedInsert(head node, new_node);

Function used to display import and export of the country

void display();

Function used to insert the domain the

country void

add_domain(chas[50]);

Function to get the importers of the particular

country

void get_importers();

Function to get list of all rich and deficient country

void get_rich_deficient_country();

Function to add the countries

```
void add_countries();
```

Function to remove the country

```
void remove_cou();
```

Function to get sum of import or sum of export

```
float sum(struct Domain *ln);
```

## 4.2 Applications

We designed this particularly for import and export in crucial period

But it can contribute in many important ways:

1.Which helps the government to choose the priority wise - Most demanded sector at the time.

2.Helps the government to face against crisis situation and natural-calamities.

3.Improve the countries-Overall GDP .

Eg: China overcomes its trade and weakness at manufacturing sector completely by not missing the industrial revolution at early 20s and it becomes global superpower.

4. Makes the investors and lay-man to seed on particular cultivation and makes their work easy.

5.Assist developing nations build their economies. They do this by increasing access to digital technologies ending regulations that lenient trade & providing analysis , technical assistance.

6.World Customs Organizations(WCO) - primary goal is to maximize the effectiveness and efficiency of each countries customs authority in order to facilitate collecting revenue ,computing trade statistics and so on..

7.Major usage comes for E-commerce sites like amazon,zomato etc..,

8. Helps the government to form new better schemes and projects

based upon domain data for future prosperous of nation.

9.It will majorly helpful for Whole-sale buyers.

## 5.SYSTEM IMPLEMENTATION

### 5.1 Code

```
#include<stdio.h>

#include<stdlib.h>

#include<string.h>

// Domain structure holds the dom(domain name) , data(excess/limited amount), next(to hold the address of the nest link)

struct Domain

{

   char dom[50];

   float data;

   struct Domain *next;

};

// Domain structure holds the cou(country name) ,expo(to hold the link-list of all the exporting domain) ,impo(to hold the link-list of all the importing domain), next(to hold the link)

//next(to hold the address of the nest link)

struct country

{

   char cou[50];

   struct Domain *impo;

   struct Domain *expo;

   struct country *next;

}*head;


//fn used for inserting domains in descending order

void sortedInsert(struct Domain **head_ref , struct Domain *new_node);
```

```
//fn used to display import and export of the country
void display();
// fn to insert the domain the country
void add_domain(char s[50]);
// fn to get the importers of the particular country
void get_importers();
//fn to get list of all rich and deficient country
void get_rich_deficient_country();
//to add the countries
void add_countries();
//to remove the country
void remove_cou();
//to get sum of import or sum of export
float sum(struct Domain *ln);


int main()
{
   head = NULL;//making head to null
   printf("############################ Welcome to International Trade
market ##########################################");
   printf("\n");
   while(1)
   {
     int ch;
     printf("\nEnter your choice\n");
```

```
printf("1)->To add country 2)->To add domain 3)->Display 4)To delete the country \n5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit : ");
//to get the chioce from user
scanf("%d",&ch);
char k[50];
switch(ch)
{
case 1:
  add_countries();
  break;
case 2:
  printf("Enter the country:");
  scanf("%s",k);
  add_domain(k);
  break;
case 3:
  display();
break;
case 4:
  remove_cou();
  break;
case 5:
  get_rich_deficient_country();
  break;
case 6:
  get_importers();
```

```
        break;
      case 7:
      exit(1);
      break;
      }
    }

}
void add_countries()
{

    struct country *temp;
    temp=(struct country*)malloc(sizeof(struct country));
    char k[50];
    printf("Enter the country name :");
    scanf("%s",k);
    strcpy(temp->cou,k);//ASSIGN THE REMP->COU=COUNTRY NAME
    temp->expo=NULL;
    temp->impo=NULL;
    if(head==NULL)//checking for the first country
    {
       head=temp;
       head->next=NULL;
       //printf("%u",*head->next);
    }
    else//if isn't first
```

```
    {
        struct country *r;
        r=head;
        if(strcmp(r->cou,k)==0)
        {
            printf("Country is already present");
            return;//its returns to main fn
        }
        while(r->next!=NULL)
        {
            r=r->next;
            if(strcmp(r->cou,k)==0)
                {printf("Country is already present");
                return;}
        }
        r->next=temp;
        temp->next=NULL;
    }
    printf("Country added");
}

void add_domain(char k[50])
{
    int y=0;//flag variable to know whether the country is present or not
    struct country *r=head;
    while(r!=NULL)
```

```
{
   if(strcmp(r->cou,k)==0)//if present break out
   {
         y=1;
         break;
   }
   r=r->next;//otherwise pass the link
}
if(y==0)
{
   printf("Country not present");
   return;//to main fn
}
int n;// to get the number of domain to be added
printf("Enter number of domains you have to add:");
scanf("%d",&n);
char k1[50];
float needed,availability;
for(int i=0;i<n;i++)
{
   printf("Enter the domain: ");
   scanf("%s",k1);
   printf("Enter the needed:\n");
   scanf("%f",&needed);
   printf("Enter the availability:\n");
   scanf("%f",&availability);
```

```
    if(availability<needed)//if needed is higher than availability then we have to import from other country
    {
       float x=needed-availability;
       printf("IMPORT--- %f\n",x);
       struct Domain *temp;
       temp=(struct Domain*)malloc(sizeof(struct Domain));
       temp->data=x;
       strcpy(temp->dom,k1);
       sortedInsert(&r->impo,temp);//insertion take place in descending order
    }
    else if(availability>needed)// if availability is higher than needed then we can export to othr country
    {
       float x=availability-needed;
       printf("EXPORT --- %f\n",x);
       struct Domain *temp;
       temp=(struct Domain*)malloc(sizeof(struct Domain));
       temp->data=x;
       strcpy(temp->dom,k1);
       sortedInsert(&r->expo,temp);
    }

  }

}
void sortedInsert(struct Domain **head_ref,struct Domain *new_node)
```

```
{


   struct Domain*current;//creating temporary node
   //if head node is null or else if data in head node is less then place the new node infront of the head node
   if(*head_ref==NULL||(*head_ref)->data<=new_node->data)
   {
      new_node->next=*head_ref;
      *head_ref=new_node;
   }
   else
   {
      current=*head_ref;
      //link keep on passing until it find the value less than the new node data
      while(current->next!=NULL&&current->next->data>new_node->data)
      {
         current=current->next;
      }
      //after finding the link is been changed
      new_node->next=current->next;
      current->next=new_node;


   }
}
void display()
{
   int y=0;
```

```
   char k[50];
   printf("Enter the country:");
   scanf("%s",k);
   struct country *r=head;
   //checking whether the country is present or not
   while(r!=NULL)
   {
      if(strcmp(r->cou,k)==0)//if present the while loop breaks
      {
            y=1;
            break;
      }
      r=r->next;
   }
   if(y==0)//not present returns to the main function
   {
      printf("Country not present\n");
      return;
   }

   struct Domain*temp=r->impo;//Creating the temporary Domain node
   printf("Import->");//to print import
   if(temp==NULL)//if country don't need to import anything then it prints nil
      printf("nil");
   while(temp!=NULL)//otherwise iteratively prints the domain name and
quantity continuously until it's temp reaches null
   {
```

```
if(temp->next!=NULL)//for formatting
{
   printf("|%s|%.2f|->",temp->dom,temp->data);
   temp=temp->next;
}
else//for formatting the print statement
{
 printf("|%s|%.2f|->",temp->dom,temp->data);
temp=temp->next;
}
}
printf("\n");
temp=r->expo;//assigning the temp to the get of the expo linkedlist
printf("Export->");//print export
if(temp==NULL)//if country don't need to import anything then it prints nil
   printf("nill\n");
while(temp!=NULL)//otherwise iteratively prints the the domain name and
quantity continuously until it's temp reaches null
{
if(temp->next!=NULL)//formatting
{
   printf("|%s|%.2f|->",temp->dom,temp->data);
   temp=temp->next;
}
else//formatting
{
 printf("|%s|%.2f|\n",temp->dom,temp->data);
```

```
    temp=temp->next;
    }
    }
}

void get_importers()
{
    char k[50];//to store the country name
    printf("Enter the country");
    scanf("%s",k);
    int y=0;
    //r is needed to store the the head of the country
    struct country *temp,*r=head ;
    //checking whether the country exists or not
    while(r!=NULL)
    {
        if(strcmp(r->cou,k)==0)
        {
                temp=r;
                y=1;
                break;
        }
        r=r->next;
    }
    if(y==0)
    {
```

```
      printf("Country not present");
      return;
   }
   //after check we make head again to head
   //getting the importer for each domain
   while(temp->impo!=NULL)
   {
     struct country *r1=head;
      float max=0;//to store the maximum amount that the country hold on that
domain
      char name[50];//to store the country name
      strcpy(name,"null");
      while(r1!=NULL)// checking the country r is not null
      {
         struct Domain *k =r1->expo;
            while (k!=NULL)//now checking the export of the other country
            {
               if(strcmp(temp->impo->dom,k->dom)==0)//if both domains are
same
               {
                 if (max<k->data)//checking it is maximum or not
                 {
                    max=k->data;//if it is maximum then expo's data
                    strcpy(name,r1->cou);// then name is assign to the r's country
name
                 }
               }
```

```
            k=k->next;//passing the export link of the country
          }
        r1=r1->next;//passing the link of the country
      }
      if(strcmp(name,"null")==0)//suppose importer not found
        printf("importer not found for %s\n",temp->impo->dom);//prints not found statement
      else
        printf("%s-%f-%s \n",temp->impo->dom,max,name);//printing the domain name,data,name of the country
      temp->impo=temp->impo->next;// changing the link to the import next
   }
}


void get_rich_deficient_country()//getting the rich and deficient country
{
   char def[50][50];// to store the deficient countries name
   float de[50];// to store how much it is deficient
   float ri[50];//to store how much it is rich
   char ric[50][50];// to store the rich countries name
   int i=0,j=0;// intialisation of iteration variable
   struct country*r;// making the temperory country node r
   r=head;//r is the start node of the country linklist
   while(r!=NULL)
   {
      float im=sum(r->impo);//getting the sum of the imports of the country
```

```
    float em=sum(r->expo);//getting the sum of the export of the country
    if(im>em)//if import is greater than export then country is deficient
    {
       de[i]=im-em;//stores how much is deficient
       strcpy(def[i],r->cou);//copys the country name
       i++;//number of country is increamented
    }
    if(im<em)//if import is less than export then country is rich
    {
       ri[j]=em-im;//stores the excess value
       strcpy(ric[j],r->cou);//copy the country name
       j++;//number of country is increamented
    }
    r=r->next;// link is moving
  }
  //sorting
  int l,o;//iteration varaiable
  //bubble sort technique
   for (l = 0; l < i-1; l++)
    for (o = 0; o < i-l-1; o++)
      if (de[o] < de[o+1])//if succeding element is higher in deficient amount
       //then that will be the first deficient countries
        {
          int t;// dummy variable
          t=de[o];//value of element at o is stored at t
          de[o]=de[o+1];//then arr[o+1] is stored to arr[o] that is previous
position
```

```
            de[o+1]=t;//then succeding element become t
            char te[50];//dummy variable
            strcpy(te,def[o]);//same as previous assignment
            strcpy(def[o],def[o+1]);
            strcpy(def[o+1],te);
        }
 for (l = 0; l < j-1; l++)
  for (o = 0; o < j-l-1; o++)
     if (ri[o] > ri[o+1])
        {
            int t;
            t=ri[o];
            ri[o]=ri[o+1];
            ri[o+1]=t;
            char te[50];
            strcpy(te,ric[o]);
            strcpy(ric[o],ric[o+1]);
            strcpy(ric[o+1],te);
        }
int n=0;
printf("defiencient country\n");
for(;n<i;n++)
{
      printf("%s\n",def[n]);//printing the deficient country
}
printf("rich country\n");
```

```
    for(n=0;n<j;n++)
    {
        printf("%s\n",ric[n]);//printing the rich country
    }
}

float sum(struct Domain *ln)//to get the sum of import or export
{
    float im=0;// to get sum of import/export
    while(ln!=NULL)//checking whether import or export is not null
    {
        im=im+ln->data;//sum of previous + present
        ln=ln->next;//link passing
    }
    return im;//returning the im

}
void remove_cou()
{
    char x[50];
    printf("Enter the country:");//enter the country to remove
    struct country *temp,*m;// making the temporary variable
    scanf("%s",x);
    temp=head;//making temp to head of the country
    while(temp!=NULL)//if temp is not null
    {
```

```
    //printf("%s",);
    if(strcmp(temp->cou,x)==0)//check whether the entered country name
and the temp->cou are same
    {
      if(temp==head)// if equal and temp is head
      {
        head=temp->next;// then make head as temp next
        free(temp);//free the temp
        printf("%s is removed\n");
        return;
      }
      else// if not head
      {
        m->next=temp->next;// them make m->next to temp->next
        free(temp);//free the temp
        printf("%s is removed\n");
        return;
      }

    }
    else//if not equal
    {
      m=temp;// m points temp
      temp=temp->next;//and temp points to temp->next
    }
  }
  printf("Country not found\n");//if not element is not present
```

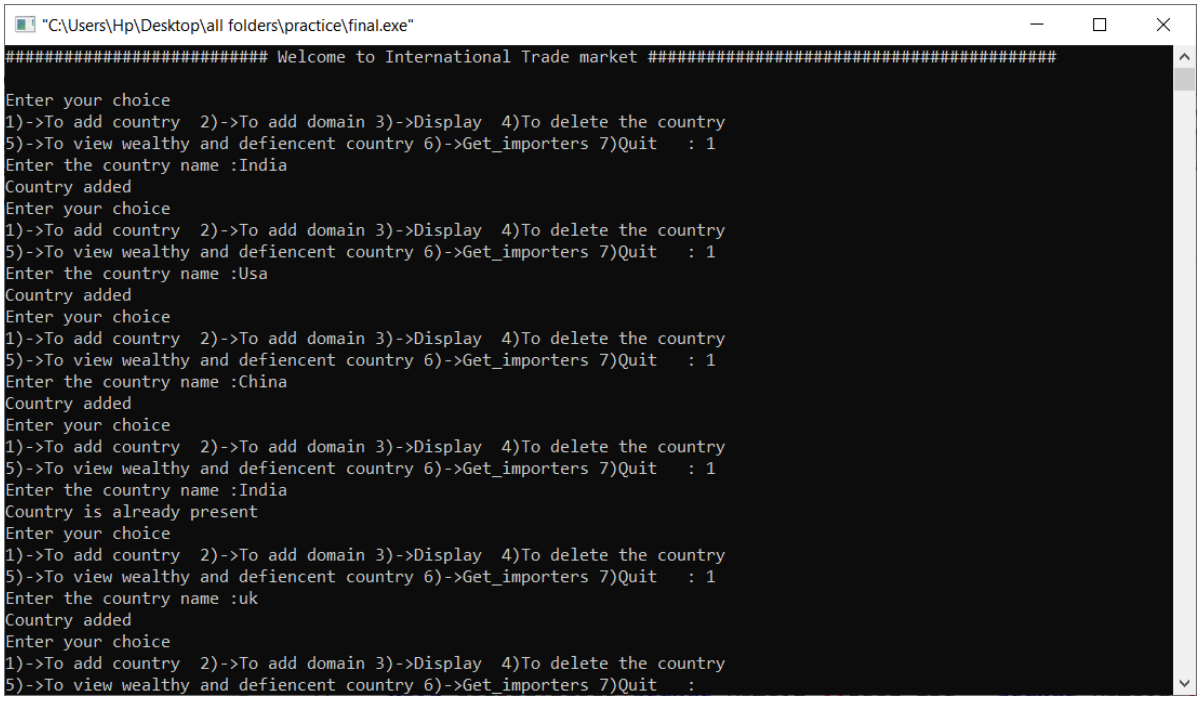
}

## 5.2Results and Discussions

### Adding of Country:

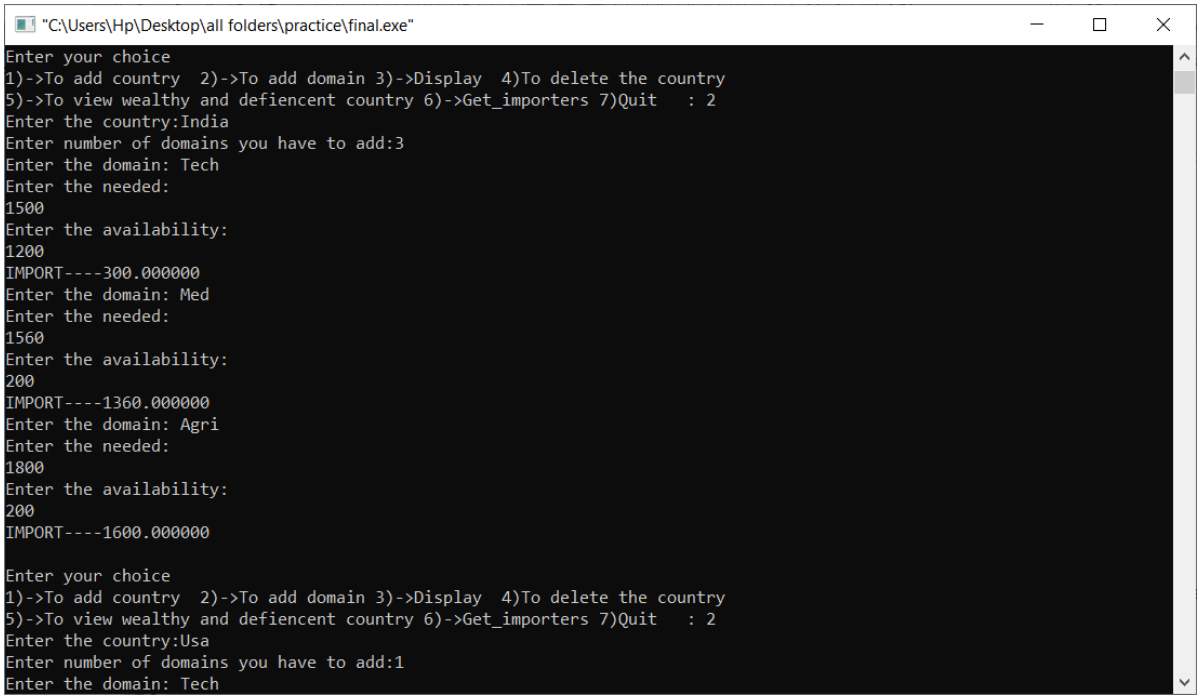
Out of 7 functionalities , main one was “To add country” function. In this function we add the country .Adding of country take place once at a time. Since the program is case sensitive “USA” and “Usa” is taken as two different countries .If the country is already present It shows the text as “country is already present”.

For example: screenshot has been pasted below



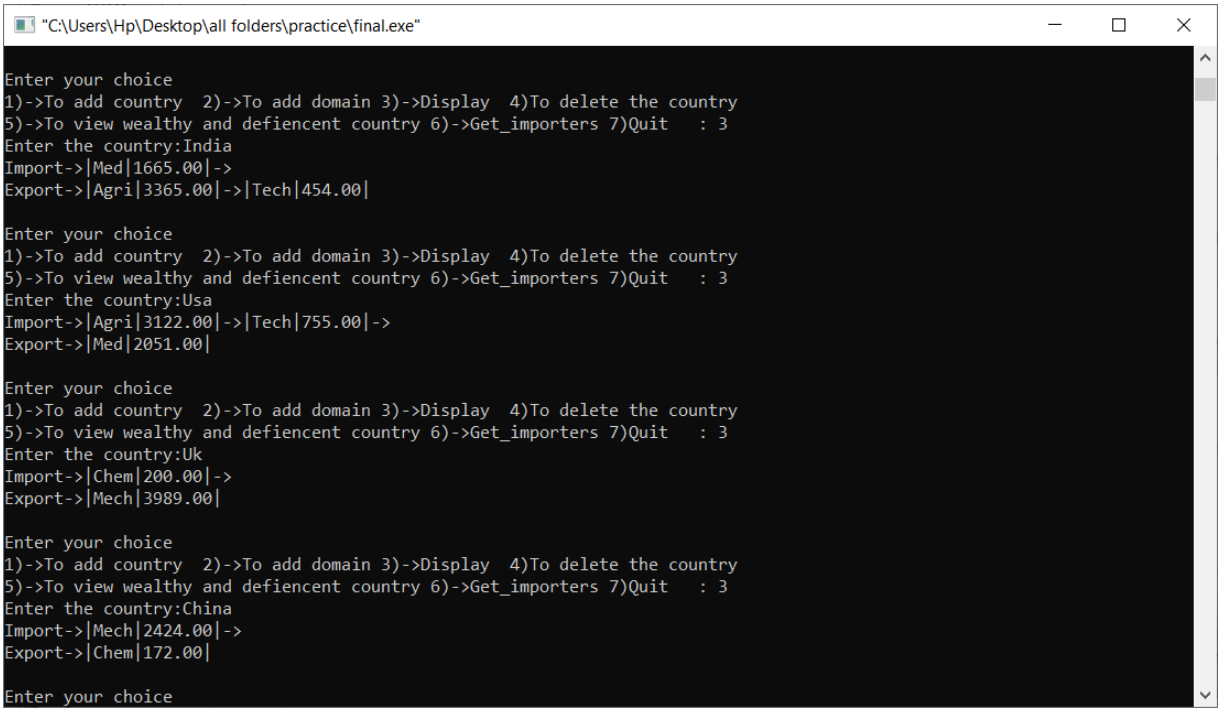
**Adding Domain:**

The second most important thing for our project is to get the details of our country's domain.When 2 is pressed then immediately it ask for country name to avoid confusion then ask how many domain to be added for that country. Then it ask for the name of domain , availability and needed for that country in that domain.According to the input it is inserted either in import or export .Printing the quantity of the excess or deficient product. Domain comes under import when availability is higher than needed. Domain comes under export when needed is higher than availability.The hypothetical situation exists when needed and availability are equal then that is sustainable domain and This project does not use sustainable domain data.



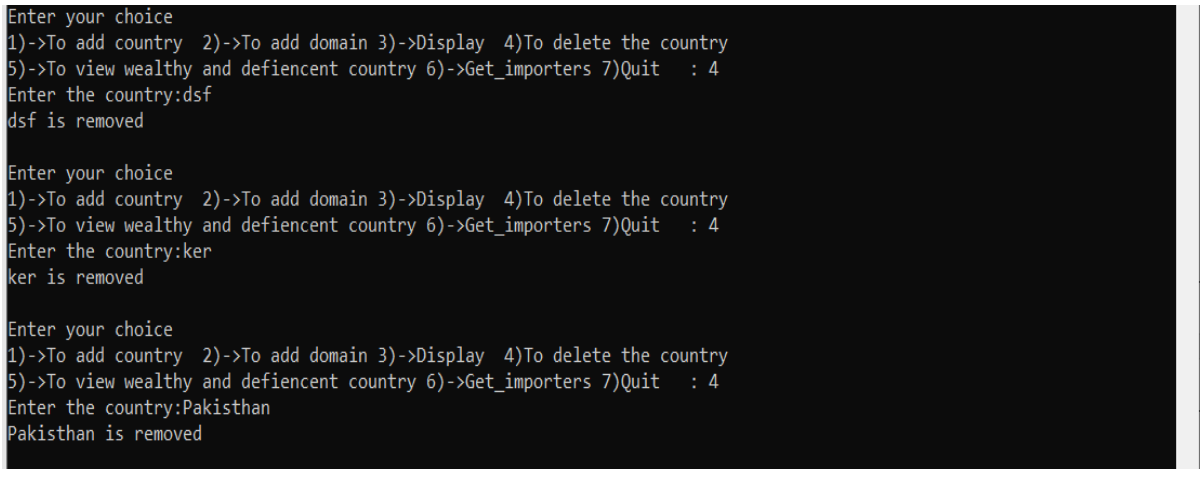
**Display:**

Third functionality of our project is to display the country's details of domain and quantity that are needed to be imported or exported.




**Remove:**

Some mismatches are  common while inputing manually. So, this remove method plays important role in cleaning the data and making the program work more accurate.



**To view wealthy and deficient country:**

The main functionality of the program . It helps to order the country as well as classify the countries as deficient and rich

```
Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 5
defiencient country
India
Afghanistan
chile
rich country
China
Algeria
Usa
```

**Get_Importer:**

Major motto of our project is to make the work simpler for the country to find the importer

```
Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 6
Enter the countryIndia
Mech-548.000000-China
Tech-800.000000-Usa
importer not found for Chems
Agri-2078.000000-Japan
```

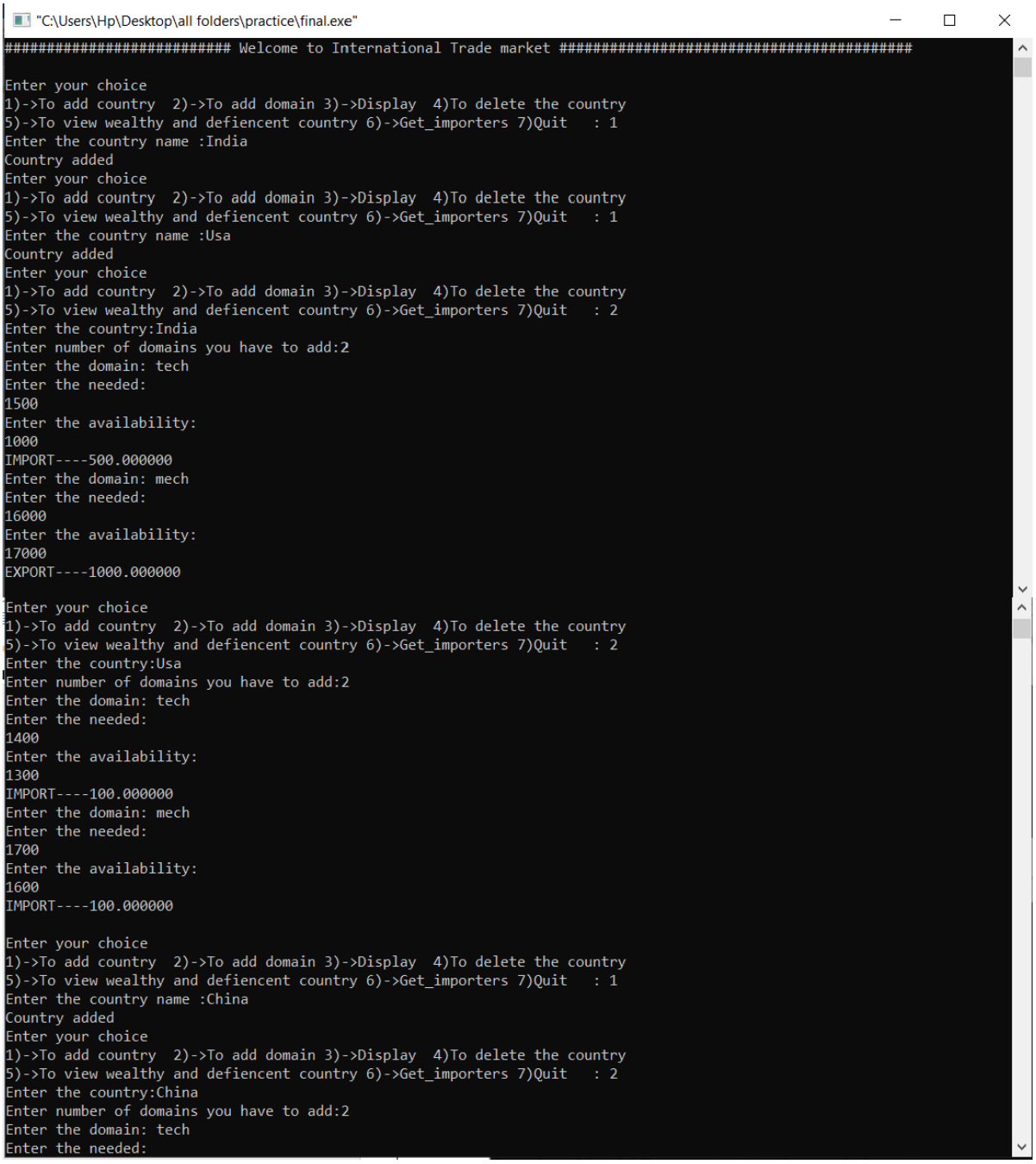
**Quit:**

Finally once our requirement is completed it is required to close it and the function is exit(0) to come out of program

```
Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 7

Process returned 1 (0x1)   execution time : 33181.009 s
Press any key to continue.
```

## Full view of project executions:



```
1560
Enter the availability:
2000
EXPORT----440.000000
Enter the domain: mech
Enter the needed:
1800
Enter the availability:
2000
EXPORT----200.000000

Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 2
Enter the country:China
Enter number of domains you have to add:1
Enter the domain: med
Enter the needed:
1700
Enter the availability:
2000
EXPORT----300.000000

Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 2
Enter the country:India
Enter number of domains you have to add:1
Enter the domain: med
Enter the needed:
2500
Enter the availability:
2000
IMPORT----500.000000

Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 5
defiencient country
Usa
rich country
China

Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 4
Enter the country:India
India is removed

Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 6
Enter the country:Usa
mech-200.000000-China
Importer not found for tech
Enter your choice
1)->To add country  2)->To add domain 3)->Display  4)To delete the country
5)->To view wealthy and defiencent country 6)->Get_importers 7)Quit   : 7

Process returned 1 (0x1)   execution time : 738.872 s
```

# 6.CONCLUSION

» From all the information mentioned previously we can make a system which shows predominant data about import & export . In which we can enter the particular country details regarding the products that can be imported & exported . By obtaining closer data from the respective country we can segregate them into developing , developed , under-developed categories from various domains. Hence we can conclude project was successfully accomplished. The future enhancement carries on:

» Alerting about trade compensations especially for Directorate General of Foreign Trade

» resource sharing to investors

» creating web-base open source application for easy needs of people.

» Wants to cover all over financial loop-holes to show-case complete website.


## Acknowledgement:

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# 7.REFERENCES

*Stack-Overflow*:

Used to verify and correct our mistakes and error whenever it occurs

https://stackoverflow.com/questions/tagged/c

*Greek for Greek*:

Used find some method for efficiency

https://stackoverflow.com/questions/tagged/c