<이산수학>_5장_프로그래밍 실습_C 코드

프로그래밍 실습 1

```
#include<stdio.h>
#include<conio.h>
#include<Windows.h>

#define domain 10

void readfile(char fn[13],char adjancy[domain+1][domain+1],int nocheck,int n2);

void main()
{
	char adjancymx[domain+1][domain+1];
	char define1,define2;
	char fn[13] = "pp3-1.dat";
	char fn2[13] = "pp3-2.dat";

	int nocol,nocheck=1,i,j,n1=10,n2=10;

		for(i=1;i<=10;i++)
		{
			for(j=1;j<=10;j++)
			{
				adjancymx[i][j] = 0;
			}
		}

		readfile(fn,adjancymx,nocheck,n1);
		printf("}₩n₩n");

		define1=1;

		for(i=1;i<=10;i++)
		{
			define2 = 0;
			nocol = 0;

			for(j=1;j<=10;j++)
			{
				if(adjancymx[i][j] == 1)
				{
					define2 = 1;
					nocol++;
				}
			}

			if(define2 == 0)
			{
				define1 = 0;
				printf("%5cf%d is not function because",' ',nocheck);
				printf(" f(%d) is not defined.₩n",i);
			}
```

```
		if(nocol > 1)
		{
			define1 = 0;
			printf("%5cf%d is not function becuase",' ',nocheck);
			printf(" f(%d) is not not unique image.₩n",i);
		}
}

if(define1 == 1)
{
		printf("%5cf%d is well-defined.₩n₩n",' ',nocheck);
}
nocheck++;
printf("₩n₩n");
for(i=1;i<=10;i++)
{
		for(j=1;j<=10;j++)
		{
			adjancymx[i][j] = 0;
		}
}

readfile(fn2,adjancymx,nocheck,n2);
printf("}₩n₩n");

define1=1;

for(i=1;i<=10;i++)
{
		define2 = 0;
		nocol = 0;

		for(j=1;j<=10;j++)
		{
			if(adjancymx[i][j] == 1)
			{
				define2 = 1;
				nocol++;
			}
		}
		if(define2 == 0)
		{
			define1 = 0;
			printf("%5cf%d is not function because",' ',nocheck);
			printf(" f(%d) is not defined.₩n",i);
		}

		if(nocol > 1)
		{
			define1 = 0;
			printf("%5cf%d is not function becuase",' ',nocheck);
			printf(" f(%d) is not not unique image.₩n",i);
		}
}
```

```
                if(define1 == 1)
                {
                        printf("%5cf%d is well-defined.₩n₩n",' ',nocheck);
                }

        system("PAUSE");
}

void readfile(char fn[13],char adjancy[domain+1][domain+1],int nocheck,int n2)
{
        FILE *fp;
        int i,x,y;

        fp = fopen(fn,"r");
        printf("%5cf%d={",' ',nocheck);

        for(i=1;i<=n2;i++)
        {
                fscanf(fp,"%d %d",&x,&y);
                adjancy[x][y] = 1;
                printf("%2c(%2d,%2d)",' ',x,y);
        }
        fclose(fp);
}
```

---

pp3-1.dat

```
1 1
2 1
3 1
3 4
6 5
6 6
7 2
7 1
9 9
10 10
```

---

pp3-2.dat

```
1 3
2 4
3 1
4 2
5 6
6 7
7 4
8 3
9 1
10 9
```