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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Problem Solving Through Programming In C (course)

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Course outline

- How does an NPTEL online course work? ()
- Week 0 : ()
- Week 1 ()
- Week 2 ()
- Week 3 ()
- Week 4 ()
- Week 5 ()
- Week 6 ()
- Week 7 ()

Week 8 : Programming Assignment 1

Due on 2023-09-21, 23:59 IST

Write a C Program to find HCF of 4 given numbers using recursive function

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	50 455 60 200	The HCF is 5	The HCF is 5	Passed
Test Case 2	67 89 45 41	The HCF is 1	The HCF is 1	Passed

The due date for submitting this assignment has passed.
2 out of 2 tests passed.
You scored 100.0/100.

Assignment submitted on 2023-09-21, 20:08 IST

Your last recorded submission was :

```
#include<stdio.h>
int HCF(int, int); //You have to write this function which calculates the HCF

int main()
{
   int a, b, c, d, result;
   scanf("%d %d %d %d", &a, &b, &c, &d); /* Takes 4 number as input from the
   result = HCF(HCF(a, b), HCF(c,d));
   printf("The HCF is %d", result);
}

//Complete the rest of the program to calculate HCF
int HCF(int x,int y)
{
  while(x!=y)
```

Week 8 ()

Week 9 ()

Week 10 ()

Week 11 ()

Week 12 ()

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```
  {
    if(x>y)
    {
      return HCF(x-y,y);
    }
    else
    {
      return HCF(x,y-x);
    }
  }
  return x;
}
```

Sample solutions (Provided by instructor)

```
#include<stdio.h>
int HCF(int, int); //You have to write this function which calculates the HCF

int main()
{
   int a, b, c, d, result;
   scanf("%d %d %d %d", &a, &b, &c, &d); /* Takes 4 number as input from the
   result = HCF(HCF(a, b), HCF(c,d));
   printf("The HCF is %d", result);
}

//Complete the rest of the program to calculate HCF
int HCF(int x, int y)
{
   while (x != y)
   {
      if (x > y)
       {
           return HCF(x - y, y);
       }
       else
       {
       return HCF(x, y - x);
       }
    }
    return x;
}
```