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**Class: BCS-SP22-4B**

**Subject: Data Structures and Algorithms-Lab Instructor: Yasmeen Jana Max Marks: 10Reg. No: SP22-BCS-025**

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**You can ask queries related to Lab Activities on the above email.**

# Activity 1: Creating a Github Account

Create a GitHub Account. Make a repository with the name “**DSA\_Lab”. Mention the link here after the account creation.**

**SOLUTION:**

**LINK**

//add two numbers using pointer

#include<iostream>

using namespace std;

int main(){

int\* p1,\*p2;

int num1, num2,sum;

cout<<"add two number \n: ";

cout <<"\n enter teo number of sum: ";

cin>>num1;

cin>>num2;

p1=&num1;

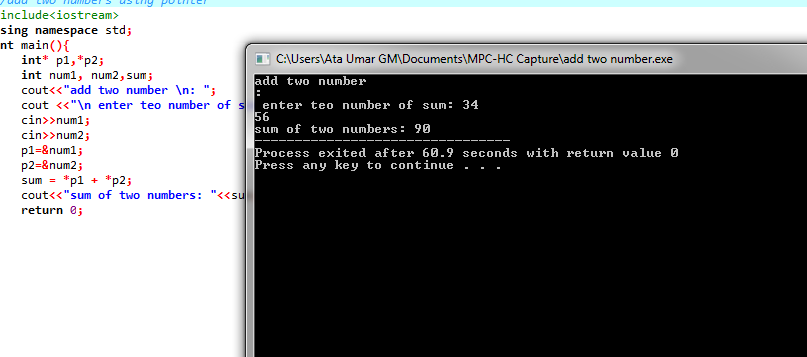
p2=&num2;

sum = \*p1 + \*p2;

cout<<"sum of two numbers: "<<sum;

return 0;

}



02

/store address and value via pointer

#include<iostream>

using namespace std;

int main(){

int num;

num = 5;

int \*p;

p = &num;

// cout << "num = " << num;

cout << "&num = " <<&num<<endl;

cout << "p = " <<p<<endl;

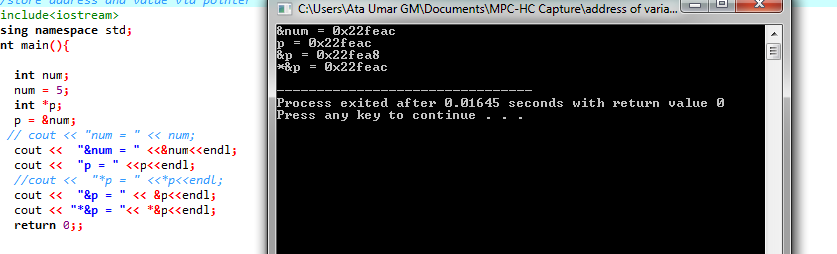
//cout << "\*p = " <<\*p<<endl;

cout << "&p = " << &p<<endl;

cout << "\*&p = "<< \*&p<<endl;

return 0;;

}



3

count even odd number

#include<iostream>

using namespace std;

int main (){

int num;

int\* p;

p = &num;

cout<<" enter a number: ";

cin>>num;

if(num%2==0){

cout<<"even: "<<endl;

}

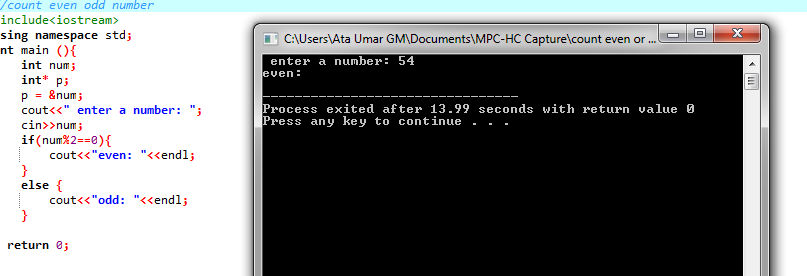
else {

cout<<"odd: "<<endl;

}

return 0;

}



4

factroial number

#include <iostream>

using namespace std;

void findFactorial(int, int \*);

int main()

{

int i,fact,num;

cout<<"Enter a number: \n";

cin>>num;

findFactorial(num, &fact);

cout<<"Factorial of " <<num<< " is: "<<fact;

return 0;

}

//function definition

void findFactorial(int num, int \*fact){

int i;

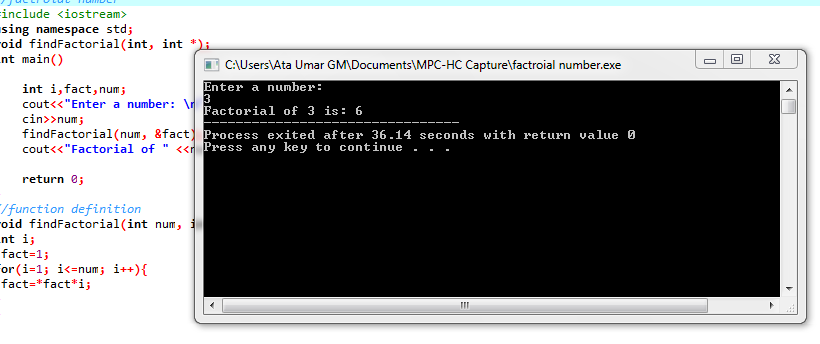
\*fact=1;

for(i=1; i<=num; i++){

\*fact=\*fact\*i;

}

}



5

/increment and decrement integer pointer

#include<iostream>

using namespace std;

int main(){

int num;

int\* p;

num = 10;

p = &num;

cout<<" \n num =: "<<num;

(\*p)++;

cout<<" \n num= : "<<num;

++(\*p);

cout<<" \n num =: "<<num;

(\*p)--;

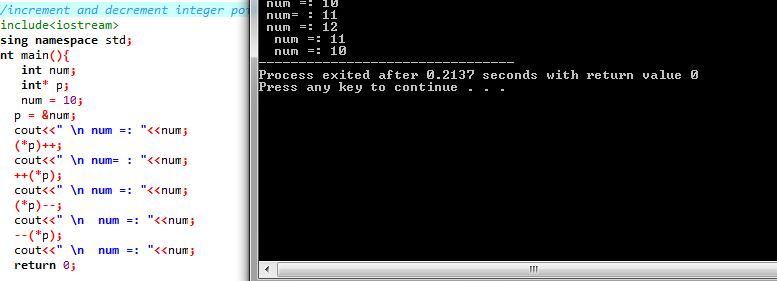
cout<<" \n num =: "<<num;

--(\*p);

cout<<" \n num =: "<<num;

return 0;

}



6

length of string via pointer

#include <iostream>

using namespace std;

int main() {

char str[20], \*pt;

int i = 0;

cout << "Calculate Length of String \n";

cout << "Enter Any string [below 20 chars] : ";

cin>>str;

pt = str;

while (\*pt != '\0') {

i++;

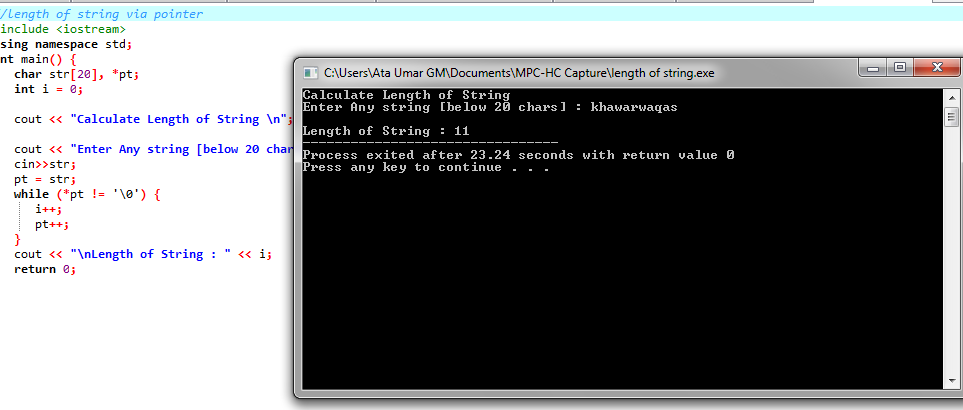
pt++;

}

cout << "\nLength of String : " << i;

return 0;

}

7

/difference two number using pointer

#include <iostream>

using namespace std;

int main() {

int \*p1, \*p2;

int num1, num2, diff;

cout << "a difference between two Numbers \n";

cout << "\nEnter Two Numbers for a Difference : \n";

cin>>num1;

cin>>num2;

p1= &num1;

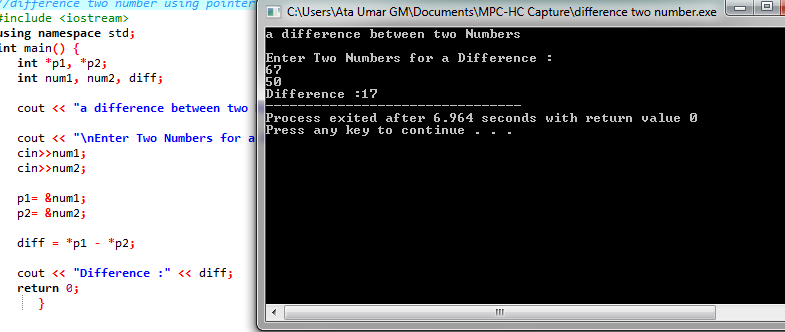
p2= &num2;

diff = \*p1 - \*p2;

cout << "Difference :" << diff;

return 0;

}



8

//find largest number via pointer

#include<iostream>

using namespace std;

int main()

{ int first,second,\*f,\*s;

f=&first;

s=&second;

cout<<"Enter first number"<<endl;

cin>>first;

cout<<"Enter second number"<<endl;

cin>>second;

if(\*f>\*s){

cout<<"Largest="<<\*f<<" and smallest="<<\*s<<endl;

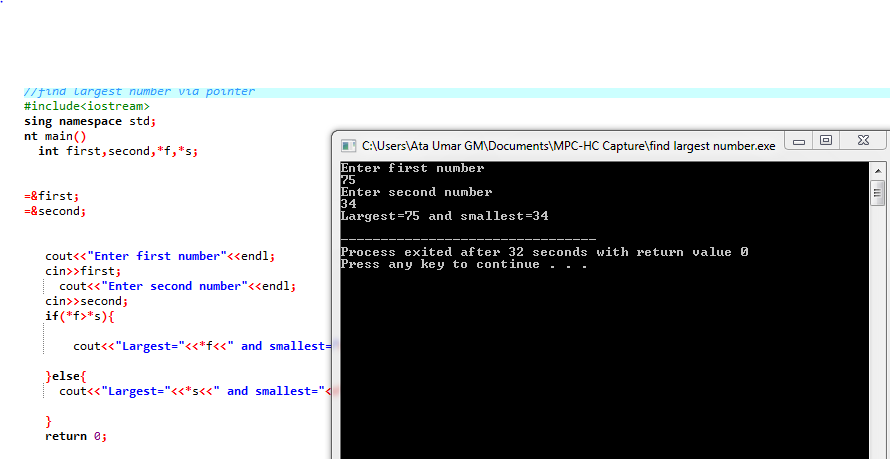
}else{

cout<<"Largest="<<\*s<<" and smallest="<<\*f<<endl;

}

return 0;

}



9

//print even number

#include<iostream>

using namespace std;

int main(){

int i;

int\* p;

p = &i;

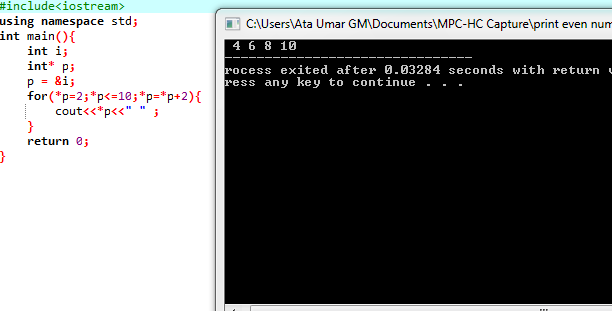
for(\*p=2;\*p<=10;\*p=\*p+2){

cout<<\*p<<" " ;

}

return 0;

}



10

/number of table

#include<iostream>

using namespace std;

int main(){

int n;

int \*p;

cout<<"enter a number: ";

cin>>n ;

p=&n;

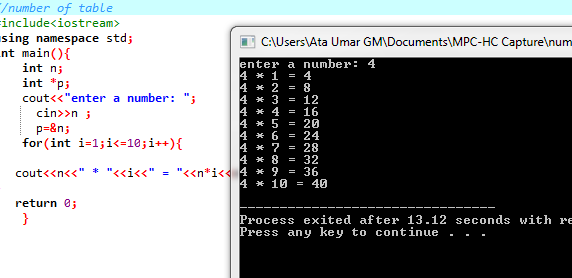
for(int i=1;i<=10;i++){

cout<<n<<" \* "<<i<<" = "<<n\*i<<endl;

}

return 0;

}



11

/revers order number

#include<iostream>

using namespace std;

int main() {

int n, r, rev = 0;

int \*num;

cout << "Enter a number:";

cin >> n;

num = &n;

while (\*num > 0) {

r = \*num % 10;

rev = rev \* 10 + r;

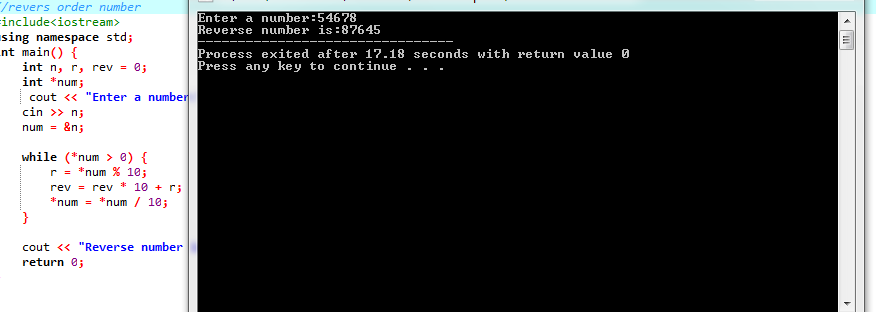
\*num = \*num / 10;

}

cout << "Reverse number is:" << rev;

return 0;

}



12

/multiplication of number

#include<iostream>

using namespace std;

int main(){

int num1,num2;

int \*p1,\*p2;

int product;

cout<<" enter the value to numi: "<<endl;

cin>>num1;

cout<<"enter tne value to num2: "<<endl;

cin>>num2;

p1 = &num1;

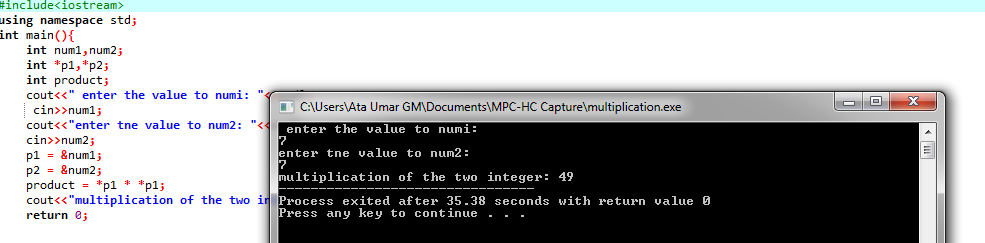
p2 = &num2;

product = \*p1 \* \*p1;

cout<<"multiplication of the two integer: "<<product;

return 0;

}



13

//check prime number

#include<iostream>

using namespace std;

int main (){

int n, i,c, count=0;

int\* p;

cout<<"enter a number for check for prime: ";

cin>>n;

p =&n;

for(i=1;i<=\*p;i++){

if(\*p%i ==0)

count++;

}

if(count==2)

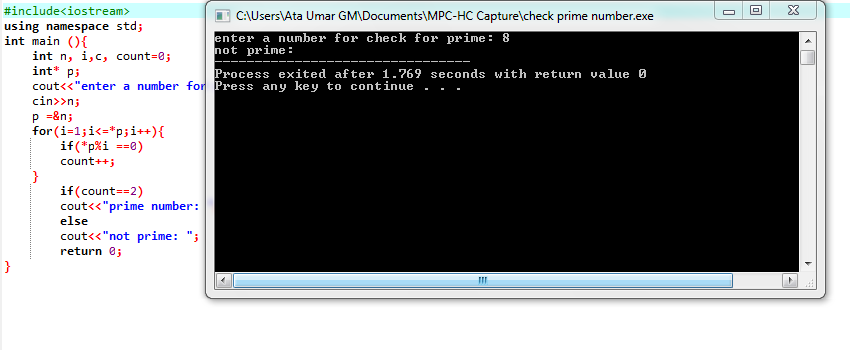
cout<<"prime number: ";

else

cout<<"not prime: ";

return 0;

}



14

/palindrom number

#include<iostream>

using namespace std;

int main(){

int n,num1, r,rev = 0;

int\* num;

cout<"<enter anumber: ";

cin>>n;

num1=n;

num = &n;

while(\*num>0){

r=\*num%10;

rev = rev \* 10+r;

\*num=\*num / 10;

}

if(rev==num1){

cout<<"number is palindrom: "<<num1;

} else {

cout<<"number is not palindrom: "<<num1;

}

return 0;

}

