

Supreme-Batch-Debug-Exercise-C++ (Week-1)

NOTE: The code snippet given may be incomplete or have compile time, runtime or logical errors.

How to attempt Debugging Exercise?

1. Copy the code to your code editor (e.g. VS Code).
2. Add relevant header files like "#include <iostream>" etc.
3. Run the code.
4. You will notice the expected output is not printing at the console.
5. Apply your smart coder mind to Debug the code.
6. **Warning:** Only see the solution after you have tried enough.
7. **Debug the code. Take input a character, print 1, if its a capital alphabet, print 0, if its a lowercase alphabet, else print -1.**

```
#include<iostream>
using namespace std;

int main() {
    char c;
    cin>>c;
    if('a'<=c || c<='z'){
        cout<<0;
    }
    else if('A'<=c || c<='Z'){
        cout<<1;
    }
    else{
        cout<<-1;
    }
}
```

Abhijay shah

1. Debug the code. It is trying to print the given pattern.

```
/*
Pattern
1
23
345
4567
*/
```

Abhijay

```

#include<iostream>
using namespace std;

int main(){
    int n;
    int i=1;
    while(i<n){
        int j = i,count = 1;
        while(count<i){
            cout<<j;
            j = j + 1;
            count = count + 1;
        }
        cout<<"\\n";
        i = i + 1;
    }
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 4
*
***
*****
*****
*/
#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int i=1;
    while(i<n){
        int j = i,count = 2*n+1,gaps=(n-i-1),k=1;
        while(k<gaps){
            cout<<" ";
            k = k + 1;
        }
        int m = 1,ch = count - 2*gaps;
        while(m<ch){
            cout<<"*";
            m = m + 1;
        }
        k = 1;
        while(k<gaps){
            cout<<" ";
            k = k + 1;
        }
        cout<<"\\n";
    }
}

```

```

        i = i + 1;
    }
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 4
1
22
333
4444
*/
#include<iostream>
using namespace std;

int main(){
    int i,j,n;
    cin>>n;
    for(i=1;i<n;i++){
        for(j=1;j<n;j++){
            cout<<i;
        }
        cout<<endl;
    }
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 4
1
21
321
4321
*/
#include<iostream>
using namespace std;

int main(){
    int i,j,n;
    cin>>n;
    for(i=1;i<n;i--){
        int p;
        for(j=1;j<n;j++){
            cout<<p;
            p--;
        }
        cout<<endl;
    }
}

```

```

    }
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 5
E
DE
CDE
BCDE
ABCDE
*/
#include<iostream>
using namespace std;

int main() {
    int i,j,n;;
    cin>>n;
    for(i=1;i<=n;i++){
        char p='A'-i;
        for(j=1;j<=i;j++){
            cout<<p;
            p++;
        }
        cout<<endl;
    }
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 4
1
232
34543
4567654
*/
#include<iostream>
using namespace std;
int main(){
    int no;
    cin>>no;
    int i=1;
    int n = 2*no;
    while(i<=(no)){
        int gaps = n-2*i+1,k=1;
        int j = i;

```

```

while(k<=gaps/2){
    cout<<" ";
    k = k + 1;
}
int ch = n - gaps + 1, z = (ch+1)/2;
while(z>1){
    cout<<j;
    j = j - 1;
    z = z + 1;
}
j = j - 1;
z = (ch-1)/2;
while(z>=1){
    j = j - 1;
    cout<<j;
    z = z - 1;
}
k = 1;
while(k<=gaps/2){
    cout<<" ";
    k = k + 1;
}
cout<<"\\n";
i = i + 1;
}
}

```

1. **Debug the code. It is trying to print the given pattern.**

```

/*
Pattern
N = 5
*
***
*****
***
*
*/
void printPatt(int n){
    int i=1;
    while(i<(n)){
        int gaps = n-2*i,k=1;
        if(i>(n)/2){
            int no = (n+1)/2;
            gaps = 2*(i%no);
        }
        while(k<=gaps/2){
            cout<<" ";
            k = k + 1;
        }
        int ch = n - 1 - gaps;
    }
}

```

```

        while(ch>=1){
            cout<<"*";
            ch = ch - 1;
        }
        k = 1;
        while(k<=gaps/2){
            cout<<" ";
            k = k + 1;
        }
        cout<<"\\n";
        i = i + 1;
    }
}

```

Solutions

solution-1.txt

```

#include<iostream>
using namespace std;

int main() {
    char c;
    cin>>c;
    if('a'<=c && c<= 'z'){
        cout<<0;
    }
    else if('A'<=c && c<= 'Z'){
        cout<<1;
    }
    else{
        cout<<-1;
    }
}

```

solution-2.txt

```

#include<iostream>
using namespace std;

int main(){
    int n;
    cin>>n;
    int i=1;
    while(i<=n){
        int j = i,count = 1;
        while(count<=i){
            cout<<j;
            j = j + 1;

```

```

        count = count + 1;
    }
    cout<<"\n";
    i = i + 1;
}
}

```

(solution-3.txt

```

#include<iostream>
using namespace std;
int main(){
    int n;
    cin>>n;
    int i=1;
    while(i<=n){
        int j = i,count = 2*n-1,gaps=(n-i),k=1;
        while(k<=gaps){
            cout<<" ";
            k = k + 1;
        }
        int m = 1,ch = count - 2*gaps;
        while(m<=ch){
            cout<<"*";
            m = m + 1;
        }
        k = 1;
        while(k<=gaps){
            cout<<" ";
            k = k + 1;
        }
        cout<<"\n";
        i = i + 1;
    }
}

```

(solution-4.txt

```

#include<iostream>
using namespace std;

int main(){
    int i,j,n;
    cin>>n;
    for(i=1;i<=n;i++){

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

            cout<<i;
        }
        cout<<endl;
    }
}

```

```
}  
}
```

(solution-5.txt

```
#include<iostream>  
using namespace std;
```

```
int main(){  
    int i,j,n;  
    cin>>n;  
    for(i=1;i<=n;i++){  
        int p=i;  
        for(j=1;j<=i;j++){  
            cout<<p;  
            p--;  
        }  
        cout<<endl;  
    }  
}
```

solution-6.txt

```
#include<iostream>  
using namespace std;
```

```
int main() {  
    int i,j,n;;  
    cin>>n;  
    for(i=1;i<=n;i++){  
  
        char p='A'+n-i;  
        for(j=1;j<=i;j++){  
            cout<<p;  
            p++;  
        }  
        cout<<endl;  
    }  
}
```

solution-7.txt

```
#include<iostream>  
using namespace std;  
int main(){  
    int no;  
    cin>>no;
```



```

int i=1;
int n = 2*no-1;
while(i<=(no)){
    int gaps = n-2*i+1,k=1;
    int j = i;
    while(k<=gaps/2){
        cout<<" ";
        k = k + 1;
    }
    int ch = n - gaps, z = (ch+1)/2;
    while(z>=1){
        cout<<j;
        j = j + 1;
        z = z - 1;
    }
    j = j - 1;
    z = (ch-1)/2;
    while(z>=1){
        j = j - 1;
        cout<<j;
        z = z - 1;
    }
    k = 1;
    while(k<=gaps/2){
        cout<<" ";
        k = k + 1;
    }
    cout<<"\n";
    i = i + 1;
}
}

```

Sol-8

```

void printPatt(int n){
    int i=1;
    while(i<=(n)){
        int gaps = n-2*i+1,k=1;
        if(i>(n+1)/2){
            int no = (n+1)/2;
            gaps = 2*(i%no);
        }
        while(k<=gaps/2){
            cout<<" ";
            k = k + 1;
        }
        int ch = n - gaps;
        while(ch>=1){
            cout<<"*";
            ch = ch - 1;
        }
        k = 1;
    }
}

```

```
while(k<=gaps/2){  
    cout<<" ";  
    k = k + 1;  
}  
cout<<"\n";  
i = i + 1;  
}  
}
```

