16 FEBRUARY CODE

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Q1. INCREMENTING A POINTER

```cpp
1  #include<iostream>
2  using namespace std;
3
4  int POS=5;
5
6  int main(){
7      cout<<"PRESENTION OF CODE BY : YASH_B65840"<<endl;
8      cout<<endl;
9      int arr[POS]={5,10,15,20,25};
10     int (*ptr);
11     ptr=arr;
12
13     for(int i=0;i<POS;i++){
14         cout<<"Address of arr["<<i<<"]=";
15         cout<<ptr<<endl;
16         cout<<"Value of arr["<<i<<"]=";
17         cout<<*ptr<<endl;
18
19         ptr++;
20     }
21     return 0;
22 }
```

```
PRESENTION OF CODE BY : YASH_B65840

Address of arr[0]=0x7fff3ef94ba0
Value of arr[0]=5
Address of arr[1]=0x7fff3ef94ba4
Value of arr[1]=10
Address of arr[2]=0x7fff3ef94ba8
Value of arr[2]=15
Address of arr[3]=0x7fff3ef94bac
Value of arr[3]=20
Address of arr[4]=0x7fff3ef94bb0
Value of arr[4]=25


...Program finished with exit code 0
Press ENTER to exit console.
```

Q2. DECREMENTING A POINTER

```cpp
1  #include<iostream>
2  using namespace std;
3
4  int POS=5;
5
6  int main(){
7      cout<<"PRESENTATION OF CODE BY : YASH_B65840"<<endl;
8      cout<<endl;
9      int arr[POS]={15,30,45,60,75};
10     int *ptr;
11     ptr = &arr[POS-1];
12
13     for(int i=POS;i>0;i--){
14         cout<<"Address of arr["<<i<<"]= ";
15         cout<<ptr<<endl;
16
17         cout<<"Value of arr["<<i<<"]= ";
18         cout<<*ptr<<endl;
19         ptr--;
20     }
21     return 0;
22 }
```

```
PRESENTATION OF CODE BY : YASH_B65840

Address of arr[5]= 0x7ffe3fa5f640
Value of arr[5]= 75
Address of arr[4]= 0x7ffe3fa5f63c
Value of arr[4]= 60
Address of arr[3]= 0x7ffe3fa5f638
Value of arr[3]= 45
Address of arr[2]= 0x7ffe3fa5f634
Value of arr[2]= 30
Address of arr[1]= 0x7ffe3fa5f630
Value of arr[1]= 15


...Program finished with exit code 0
Press ENTER to exit console.
```

Q3. POINTER COMPARISON

```cpp
1  #include<iostream>
2  using namespace std;
3
4  int POS=5;
5
6  int main(){
7      cout<<"PRESENTATION OF CODE BY : YASH_B65840"<<endl;
8      cout<<endl;
9      int arr[POS]={15,30,45,60,75};
10     int *ptr;
11     ptr = &arr[POS-1];
12
13     int i=4;
14
15     while(ptr <= &arr[POS-1])
16     while(i>=0){
17     {
18         cout<<"Address of arr["<<i<<"]= ";
19         cout<<ptr<<endl;
20
21         cout<<"Value of arr["<<i<<"]= ";
22         cout<<*ptr<<endl;
23         ptr--;
24         i--;
25     }
26     }
27     return 0;
28  }
```

```
PRESENTATION OF CODE BY : YASH_B65840

Address of arr[4]= 0x7ffdbb1f4720
Value of arr[4]= 75
Address of arr[3]= 0x7ffdbb1f471c
Value of arr[3]= 60
Address of arr[2]= 0x7ffdbb1f4718
Value of arr[2]= 45
Address of arr[1]= 0x7ffdbb1f4714
Value of arr[1]= 30
Address of arr[0]= 0x7ffdbb1f4710
Value of arr[0]= 15
```

Q4. CLASS AND OBJECTS

```cpp
1  #include<iostream>
2  using namespace std;
3
4  class book{
5      //public:
6      int book_id;
7      int price;
8  public:
9      void input(){
10         cout<<"Enter book id: ";
11         cin>>book_id;
12         cout<<"Enter book price: ";
13         cin>>price;
14     }
15
16     void display(){
17         cout<<"The book id is "<<book_id<<" and "<<"The book price is "<<price<<endl;
18         cout<<endl;
19     }
20 };
21 int main(){
22     cout<<"PRESENTATION OF CODE BY : YASH_B65840"<<endl;
23     cout<<endl;
24     book b1,b2;
25     b1.input();
26     b1.display();
27     b2.input();
28     b2.display();
29
30     /* book b3;
31     b3.book_id=3;
32     b3.price=200;
33     cout<<b3.book_id<<" "<<b3.price<<endl;*/
34 }
```

```
PRESENTATION OF CODE BY : YASH_B65840

Enter book id: 12
Enter book price: 200
The book id is 12 and The book price is 200

Enter book id: 23
Enter book price: 800
The book id is 23 and The book price is 800



...Program finished with exit code 0
Press ENTER to exit console.
```

ERROR (ACCESSING PRIVATE DATA MEMBERS OUTSIDE CLASS)

```cpp
1  #include<iostream>
2  using namespace std;
3
4  class book{
5      //public:
6      int book_id;
7      int price;
8  public:
9      void input(){
10         cout<<"Enter book id: ";
11         cin>>book_id;
12         cout<<"Enter book price: ";
13         cin>>price;
14     }
15
16     void display(){
17         cout<<"The book id is "<<book_id<<" and "<<"The book price is "<<price<<endl;
18         cout<<endl;
19     }
20 };
21 int main(){
22     book b3;
23     b3.book_id=3;
24     b3.price=200;
25     cout<<b3.book_id<<" "<<b3.price<<endl;
26 }
27
28
```

Compilation failed due to following error(s).

```
main.cpp:23:8: error: 'int book::book_id' is private within this context
   23 |     b3.book_id=3;
      |        ^~~~~~~
main.cpp:6:9: note: declared private here
    6 |     int book_id;
      |        ^~~~~~~
main.cpp:24:8: error: 'int book::price' is private within this context
   24 |     b3.price=200;
      |        ^~~~~
main.cpp:7:9: note: declared private here
    7 |     int price;
      |        ^~~~~
main.cpp:25:14: error: 'int book::book_id' is private within this context
   25 |     cout<<b3.book_id<<" "<<b3.price<<endl;
      |              ^~~~~~~
main.cpp:6:9: note: declared private here
    6 |     int book_id;
      |        ^~~~~~~
main.cpp:25:31: error: 'int book::price' is private within this context
   25 |     cout<<b3.book_id<<" "<<b3.price<<endl;
      |                              ^~~~~
main.cpp:7:9: note: declared private here
    7 |     int price;
      |        ^~~~~
```