Compile the given code and check whether output of the following program is correct or not , if not debug it using gdb and correct the code accordingly.

1)
```c
#include <stdio.h>
int main()
{
   int a,b;
   int c=a+b;
   printf("%d",c);      // Output: 5
   return 0;
}
```

2)
```c
#include <stdio.h>
int main()
{
   int d=2;
   printf("Enter the value of d:");
   scanf("%d",d);
   printf("The value of d is:%d",d);
   return 0;
}
```

3)
```c
#include <stdio.h>
#include <stdlib.h>
int factorial(int n);
```

```c
int main(void) {

int n = 5;

int f = factorial(n);

printf("The factorial of %d is %d.\n", n, f);

n = 17;

f = factorial(n);

printf("The factorial of %d is %d.\n", n, f);

return 0;

}

//A factorial is calculated by n! = n * (n - 1) * (n - 2) * ... * 1

//E.g. 5! = 5 * 4 * 3 * 2 * 1 = 120

int factorial(int n) {

int f = 1;

int i = 1;

while (i <= n) {

f = f * i;

i++;

}

return f;

}
```

4)
```c
#include <stdio.h>

int main(void)

{

int arr[2];
```

```c
arr[3] = 10; // Accessing out of bound

return (0); }
```

5)
```c
#include <stdio.h>

int main()

{

int *p;

printf("%d",*p);

return 0;

}
```