

Bilal 19B-052-SE Section: A

Lab 04

Programming Exercise:

Q1:

In [1]:

```
# import complex math module
import cmath

a = int(input("Enter the value of a:"))
b = int(input("Enter the value of b:"))
c = int(input("Enter the value of c:"))

#calculate the discriminant
d = (b**2)-(4*a*c)

#find two solutions

sol1 = (-b+cmath.sqrt(d))/2*a
sol2 = (-b-cmath.sqrt(d))/2*a

print('The solution are {0} and {1}'.format(sol1,sol2))
```

```
Enter the value of a:4
Enter the value of b:6
Enter the value of c:9
The solution are (-12+20.784609690826528j) and (-12-20.784609690826528j)
```

Q2:

In [2]:

```
a = 10
d = 3
n = 4

an = a + (n-1)*d
print("The arithmetic sequence of n number is:", (an))
```

```
The arithmetic sequence of n number is: 19
```

Q3:

In [3]:

```
# program which return reverse of a string
def reverse(s):
    return s[::-1]

def isPalindrome(s):
    # Calling reverse function
    rev = reverse(s)

    # Checking if both string are equal or not
    if (s == rev):
        return True
    return False

# Driver code
s = "civic"
ans = isPalindrome(s)

if ans == 1:
    print("Yes")
else:
    print("No")
```

Yes

Q4:

In [5]:

```
# Import from user
Name = str(input("enter your name:" ))
Fathername = str(input("enter your father name:" ))
Rollnumber = str(input("enter your roll number:" ))
sub1 =int(input("Enter marks of the first subject: "))
sub2 = int(input("Enter marks of the second subject: "))
sub3 = int(input("Enter marks of the third subject: "))
sub4 = int(input("Enter marks of the fourth subject: "))
sub5 = int(input("Enter marks of the fifth subject: "))
avg = (sub1+sub2+sub3+sub4+sub5)/5
if(avg>=80):
    print("Grade: A+")
elif(avg>=70&avg<80):
    print("Grade: A")
elif(avg>=60&avg<70):
    print("Grade: B")
elif(avg>=50&avg<60):
    print("Grade: C")
else:
    print("Grade: D")
```

```
enter your name:Bilal
enter your father name:Yousuf
enter your roll number:052
Enter marks of the first subject: 80
Enter marks of the second subject: 85
Enter marks of the third subject: 77
Enter marks of the fourth subject: 83
Enter marks of the fifth subject: 70
Grade: A+
```

In []:

In []:

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