

## DSAP Homework4 手寫

B05703100 財金三 郭仲嘉

### 第一題

(a)

```
(a) bool match ( string s )
{
    stack st
    for each char c in s
    {
        if c is '('
        {
            st.push('(')
            continue
        }
        else if c is ')'
        {
            if st.empty() return false
            else
            {
                st.pop()
                continue
            }
        }
        else continue
    }
    if st.empty return true
    return false
}
```

(b)

```
(b) void p-Item ( stack st )  
{  
    stack temp  
    while ( ! st.empty() )  
    {  
        temp.push ( st.peek() )  
        st.pop()  
    }  
    while ( ! temp.empty() )  
    {  
        temp.peek().print()  
        temp.pop()  
    }  
}
```

(c)

```

    }
(c) void stack::print ( )
    {
        stack temp;
        while ( ! this->empty() )
        {
            temp.push ( this->peek() )
            this->pop()
        }
        while ( ! temp.empty() )
        {
            temp.peek().print ( )
            this->push ( temp.peek() )
            temp.pop()
        }
    }
}

```

(d)



(d) int  $C(n, k)$

{ int result  
stack st

while (!st.empty())

$(n, k) = \text{st.pop}()$

if  $k=0$  or  $k=n$  result += 1

else if  $k > n$  result += 0

else

st.push ( $C(n-1, k-1)$ )

st.push ( $C(n-1, k)$ )

return result

}