

2(a) Online banking System

(i) Login

Input - Username & password
Process - Verify password
Output - Redirect to homepage
of the user's account.

(ii) Deposit - Money

Input - Enter the account no, cvv
& the amount

Process - Verify account no, cvv.
Add the amount to the acc.
balance.

OUTPUT: show 'successful' if
transaction ~~has~~ is complete
& else,
show 'not successful' if
transaction has failed.

(iii) Withdraw - Money

Input - Enter the amount to
be taken out.

Process - check ~~if~~ the amount
is available in acc.

Output - show 'transaction
Successful' if amount is
available & display remaining
balance.

Else

Show 'transaction failed' &
display account balance.

2(B) In Computer programming, ~~st~~ cohesion refers to the degree to which the elements inside a module together. In contrast, low cohesion is associated with undesirable traits such as being difficult to maintain, test, reuse, or even understand with coupling, a different concept.

Modules with high cohesion ~~intend~~ ~~also~~ to be preferable, because high cohesion is associated with several desirable traits of software including robustness, reliability, reusability and understandability.

The different types of cohesion are:-
① functional cohesion: The execution of the task related to the problem is the only concern from all the elements inside the focused.

E.g:- Read transaction record,
Cosine angle computation,
Seat assignment to an airline passenger, etc.

② Sequential cohesion: The data which is the output of one activity is used as input data for the next activity, the involvement of elements is as such easy maintenance.

E.g:- cross validate record and formatting of module, raw records usage, formatting of raw records, returning of formatted cross validated records.

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③ Communicational Cohesion: The activities using the same input data or output data are contributed by the elements inside the module.

E.g:- Customer details determining modules, usage of customer acc. no, finding the name of the customer, etc.

④ Procedural Cohesion: The activities are related if the elements in the module are related by sequence, otherwise they are not related.

E.g:- read, write, edit of module, record use out, etc.

⑤ Temporal Cohesion: The activities related in time consists of elements from the module.

E.g:- initialization of module, setting the counter to zero, etc.

⑥ Logical Cohesion: The activities of the same type or same general category is contributed by the elements in the module.

E.g:- use type.

Some example of logical cohesion are module for displaying record as below:

- use type of the record as record
- If type of the record is student, then
- Display the record from student

⑦ Coincidental Cohesion: The activities with meaningless relationship with one another are contributed by the elements in the module.

E.g:- module for miscellaneous functions, customer record usage, etc.