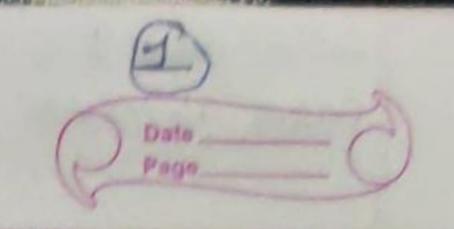
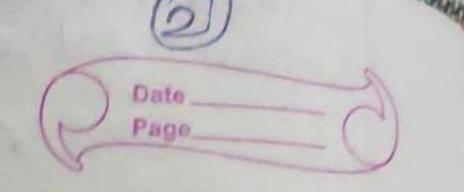
## Assibment - I



ANS: To brind one Application and It's features will de using microservices architecture.

- microsenices Architecture B an affroach in which a smale application B composed of many jousely coursed and interendently defloyable smalle & Services.
- I some features of microservices are: highly maintainable and testable 100sely ourled, In resemblently desloyable, Organized ground pusiness carability. owned by small team. flexibility and Agility, Isolation and seemosty Better resource utilization Asaltability to Growth,
- -> The microservices architecture enables the outid frequent and reliable delivery of large, complex applications. It also enables an organization to evolve it's technology stack.
- of for instance, if we want to change our product mases and how they look. Then st Shouldn't be a problem because all the different tasks over here are provided



as service of Jon want to change the way
the Products made looks then you will have
to change only this particular apprication
dight so by only changing this service.

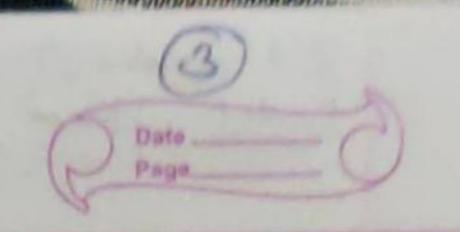
Your Job will be done. Joy do not have to
worm about the other services and you do
not have to change anything over there so
the main change you will have to be being
will be restricted to only this particular
service so you save time and you save
effort over here in case of microsenices
sholping application.

Smaller embarmments including web and mobile applications to not require such a sobret communication layer and are easier to solvet develop using a microservicer architecture.

case as it becomes too large with time and hence difficult to manage, we need to re-deploy the whole application, even for a small change As the size of application increases, it's startup and deployment time also more ages, for any new developer Joining the project it is very difficult to understand the lagic of a large monolithic application even their responsibility is related to a single functionality.

poted Shirom

THE REAL PROPERTY.



A hospital management Company wants to build a system to keep record of Doctor / Patient cheek in and another sistem for managing hospitals parking lot. Another both the cases and suggest whether it a good idea to build a microservice or buy a commercial aff the shelf saftware for each case.

If ne consider byilding a microservice from
the scrutch then we have to keep some
factors in our mind such as,

Development Costs,

maintamance coets,

scaling Costs.

of ne consider purchasing a saftname than

some factors to check are:

vendor resultation,

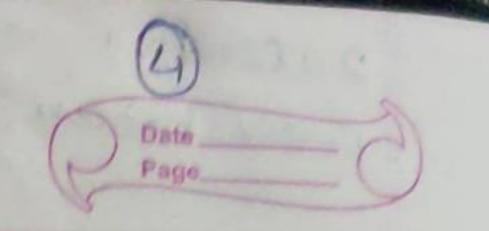
suffect,

suffect,

suffect,

-> Men it makes sense to build. There are 2
Scenarios when orting to build B the best

The first is if your microscrices mere up the core functionality of your organization and are the very differentiator for your bushess. When it comes to technology keeping the Core of your product or service Profrietary is aways pre-ferred.



Secondly, it makes more sense to byold if don are simply unable to find a product in the market that suits your need.

When it makes sense to puild, if the functionality you need is not fast of your products care, and is therefore not a key differentiator in the marker -like authentication or content management, softnesse for example - it makes a whole lot more sense to buy, That's especially true if your come across a high - maily vendor that cam easily integrate with your exiting stack

For a parking not management suctem,

considering that seq. are likely to be

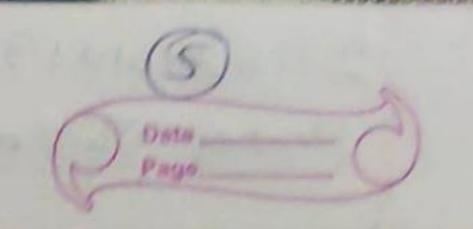
Standard and less Complex compared to a

custom Solution, buying a cost sufficient

could be a more efficient and Cost effective

after.

Jases on a careful analysis of the specific meeds, available resources tested level customization, Integration requirements and long-term maintaine name Considerations.



p-3 Do ne have to use only Java for implementary microservices & justify your answer.

No, we do not have to use only Java for implementing microservices. These are several good reasons to consider other jansuages and frameworks:

Polyglot Architecture: one of the benefits of microservices is the ability to use different prog. languages based on what is best suited for each Service. Enforcing a single language across all services loses this Advantage.

Leverage different lang, strengths:

Different lang, have different strengths, for Example,

note is paged for to-heavy morrigads,

co is good for building network Services,

Python has a lot of Lata scrence libraries etc.

Using only sava mould restrict tarring into

these strengths.

Avoid vender lock-in! Having microservices

menemented in different janguages Prevents

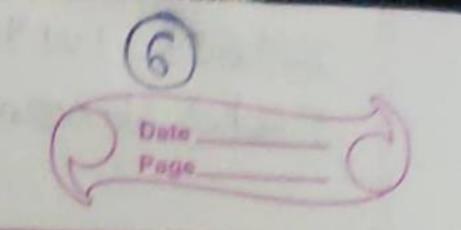
over-region ce on a single technology stack

and groids vender pock-in.

Developer Productivity:

Forcing all developers to use Java even if they
have little expenience with it may impact
their productivity.

21162101019 Pader Shirams.



John Summary, While java Ba Polmar choice

Ning mulitple languages provides storageant

benefits like a better leveraging of

language calabilities, teveloper productivity,

avoitance of vendor lock-in and improved

Scalibility and fautt Bolation.

A Polyglot Ashigeotyre is Preferred for microsemple.

Q-4

What will be the output of the following Code snippets. Explain the reason for the Obtained authors:

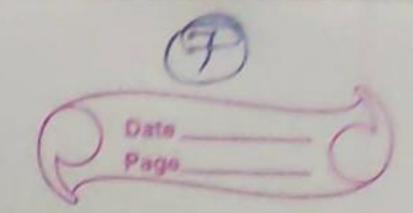
display(); Console 129 ('is' typeof a = == 'unsernes'); Console 129 ('a' typeof a = == 'unsernes');

Soli- b False a me

The dipplay () function declares a variable 'a' and assigns it the value of b'.

Since 'b' is not declared, it becomes an implicit global variable.

I when derigy () is couled, b' introduced to Jo and 'a' is also assisted the value to.



After JBP194() exits, b' is still aranjable in the global scope while a' was local to the JBP197 () fynation. 3) The first console. 109 cheeks it b' & undefined which evaluates to Ruse since b' exists in the Flobal Score. The second console.109 cheeks if 'a is undefined, which evaluates to the since a was limited to the doplay () function scale (2) use storet ; Function Jappay() { vax 9-6=10; DAPIAY () 3 console. jog ('b' typeof b=== 'underned'); Console 1020 (a', typent a=== 'undefnes'); & tother Emori bil not terned. 95 tespe In the first cole only D defined and b not b so the outent shews a as true and b feelse. Leve, Use storet 3 used. Storet mote makes it easier to write 's eause javavent strict mode changes Preniences accepted bad syntax no real coros. In strict mote and assisnment to a nonwritable forserty, a getter only forferty, a non exelting Property, a non-exeting variable or a non-existing object will thook an errot.