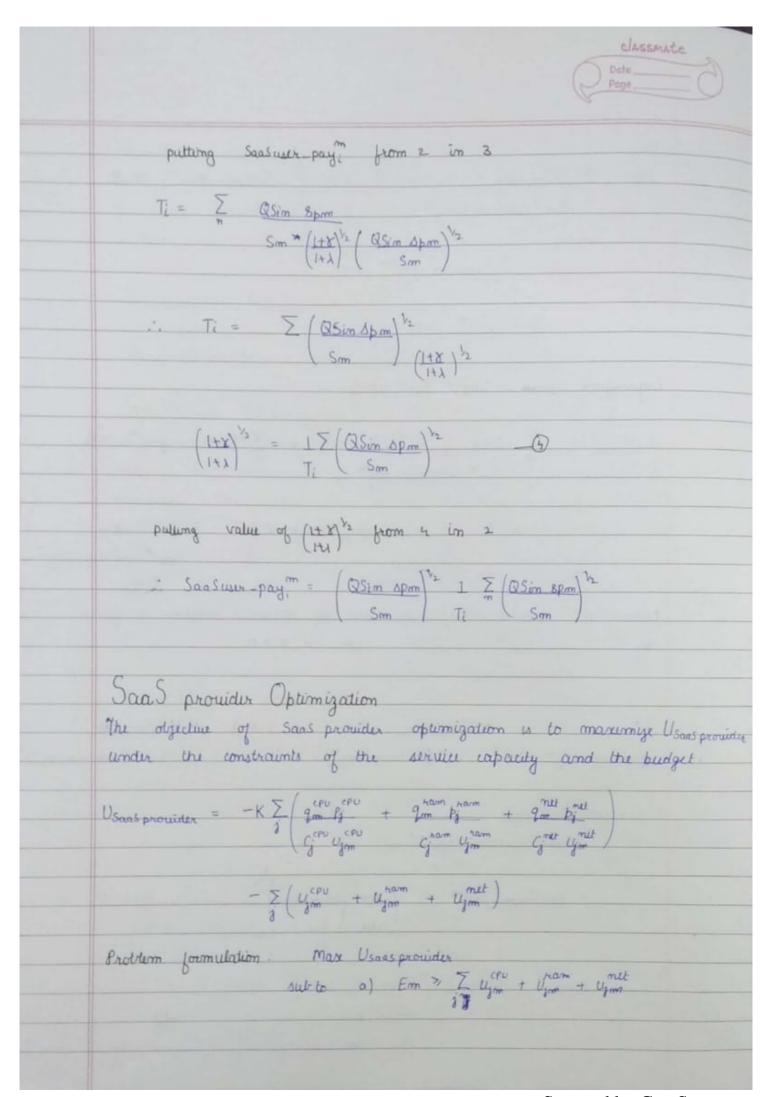


Scanned by CamScanner



b)
$$C_{g}^{SD} > \sum_{m} v_{gmn}^{Nam}$$

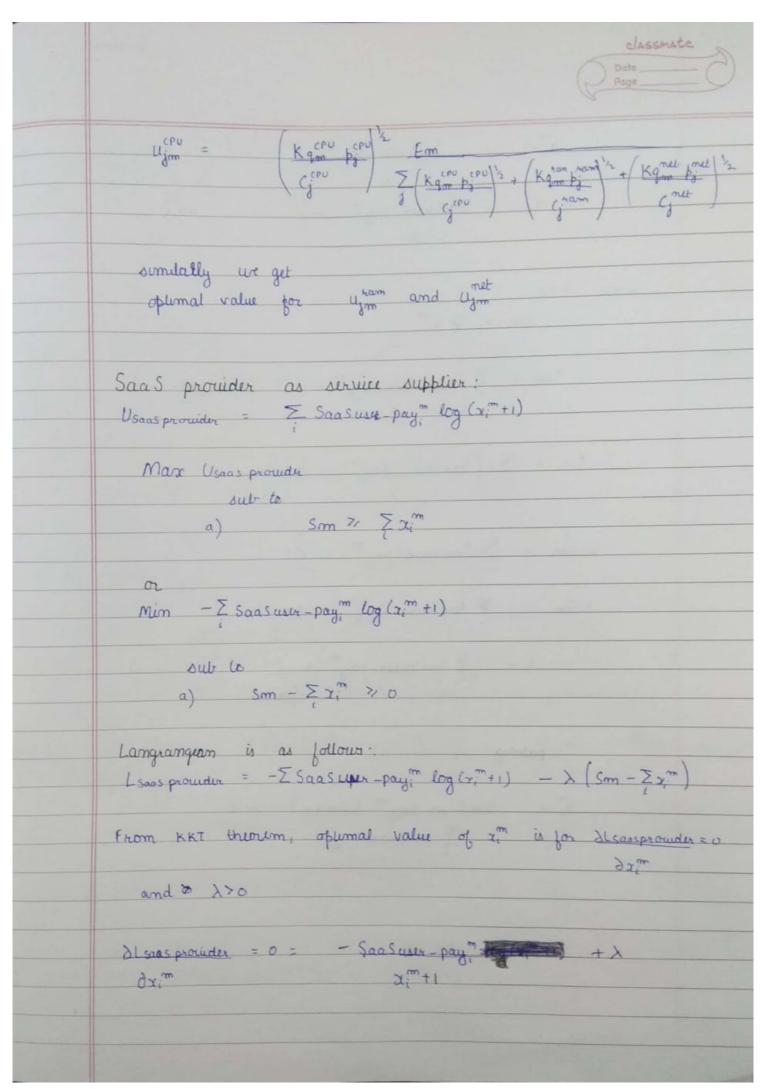
c) $C_{g}^{ND} > \sum_{m} v_{gmn}^{Nam}$

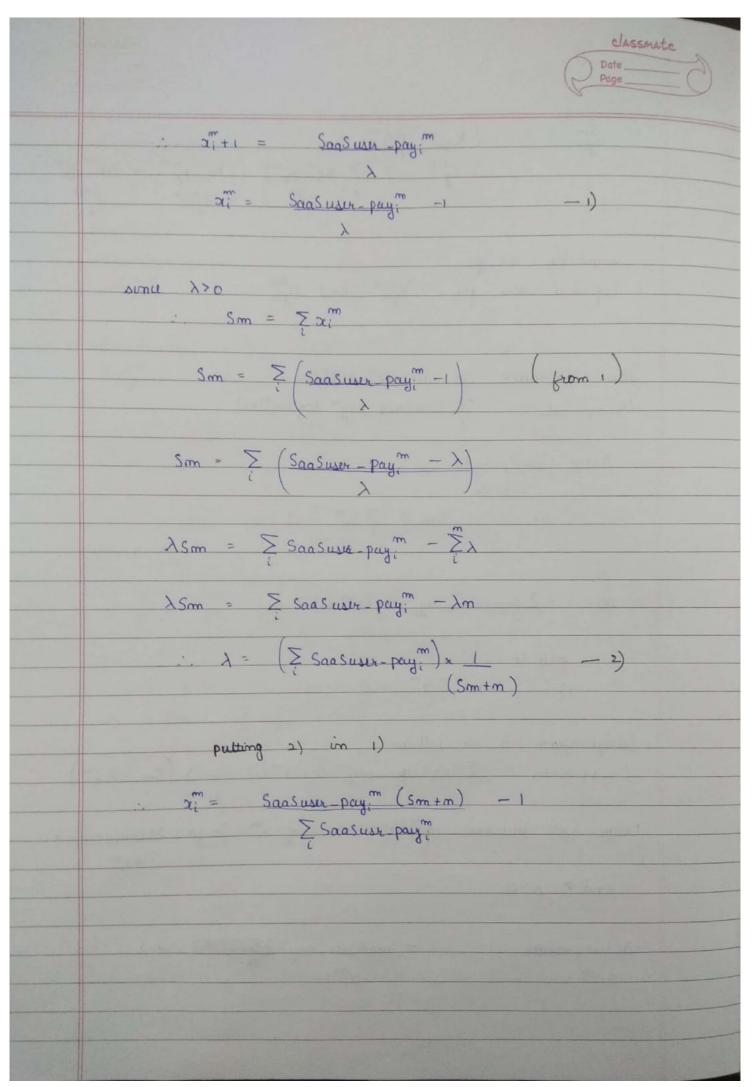
d) $C_{g}^{ND} > \sum_{m} v_{gmn}^{Nam}$

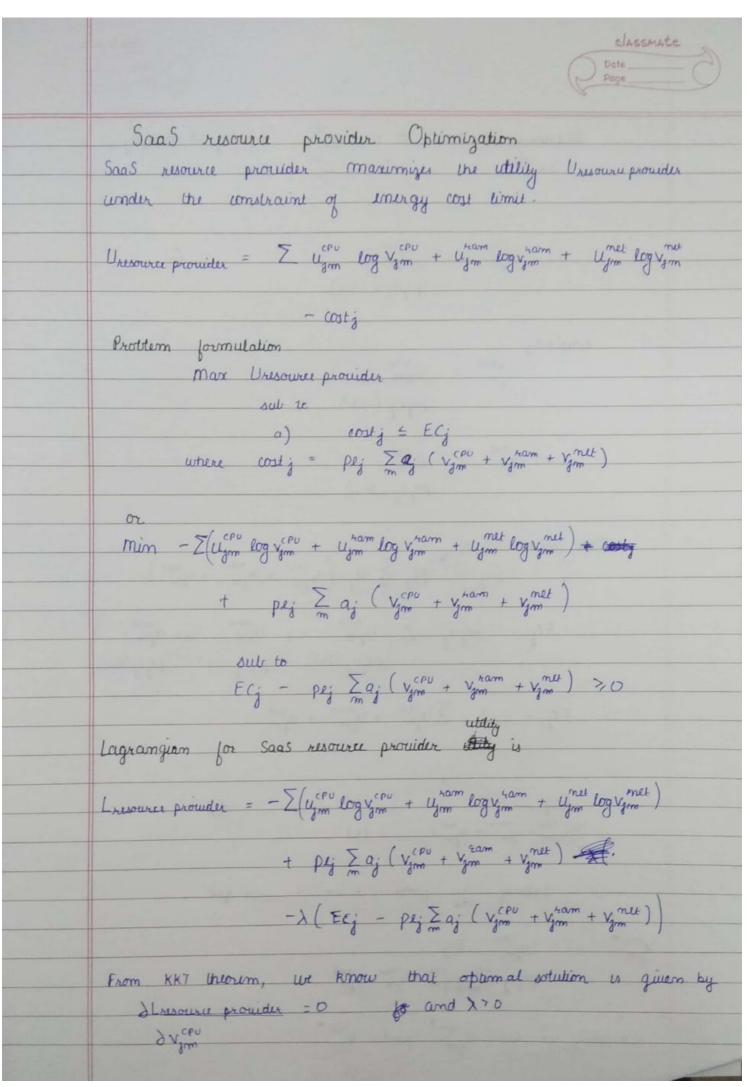
or.

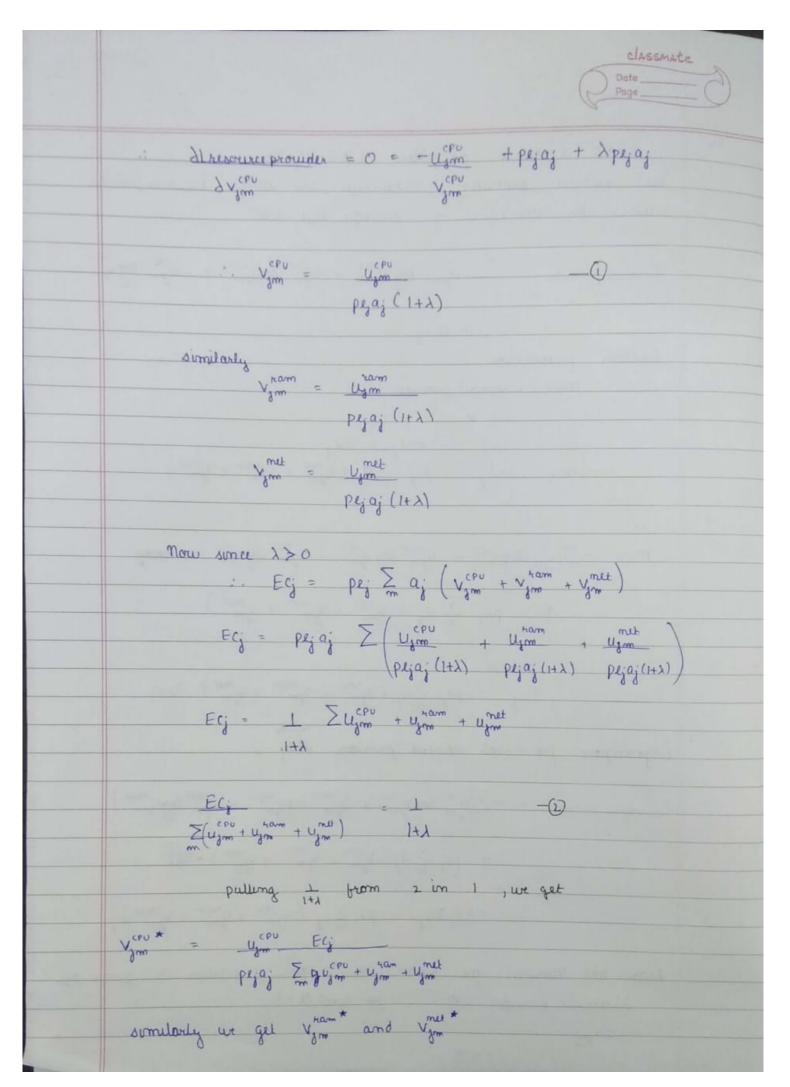
Mim $K \sum_{g} \left(\frac{c_{g}^{N} v_{gmn}^{CD}}{c_{g}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND} v_{gmn}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND} v_{gmn}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND} v_{gmn}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND} v_{gmn}^{ND}} + \frac{c_{gmn}^{ND} v_{gmn}^{ND}}{c_{gmn}^{ND} v_{gmn}^{ND}} +$

Classmate Date Page
desages provider = 0 = - Kgcpu pcpu + 1+2
Sugar
Similarly Alsoes provide = 0 = - Kam from + 1+x
Julyan (Jam (Uyan)2
disasprouder = 0 = - Kamet pret + 1+) dilym (jult (ujunt)2
$\frac{1}{\sqrt{2}} = \frac{\left(\frac{\sqrt{2}}{\sqrt{2}} + \frac{\sqrt{2}}{\sqrt{2}}\right)^{1/2}}{\left(\frac{\sqrt{2}}{\sqrt{2}} + \frac{\sqrt{2}}{\sqrt{2}}\right)^{1/2}} = \frac{\left(\frac{\sqrt{2}}{\sqrt{2}} + \frac{\sqrt{2}}{\sqrt{2}}\right)^{1/2}} = \left(\frac{\sqrt{$
Harm = (Kam ram)/2 (Kam (1tx))
$U_{jrm}^{net} = \left(\frac{K_{qrm} + met}{K_{qrm} + met}\right)^{1/2}$ $(j^{net} (1+\lambda))$
Em = \(\frac{1}{2} \) \(\fra
$Em = (1)^{1/2} = \sum_{k \in \mathbb{Z}_{m}} \frac{(pv)^{1/2}}{(pv)^{1/2}} + \frac{(qm)^{1/2}}{(qm)^{1/2}} + \frac{met}{(qm)^{1/2}} = (1+\lambda)^{1/2}$ $(qm)^{1/2} = (1+\lambda)^{1/2} = \sum_{k \in \mathbb{Z}_{m}} \frac{(pv)^{1/2}}{(qm)^{1/2}} + \frac{(qm)^{1/2}}{(qm)^{1/2}} + \frac{met}{(qm)^{1/2}} = (1+\lambda)^{1/2}$ $(qm)^{1/2} = (1+\lambda)^{1/2} = \sum_{k \in \mathbb{Z}_{m}} \frac{(pv)^{1/2}}{(qm)^{1/2}} + \frac{(qm)^{1/2}}{(qm)^{1/2}} + \frac{met}{(qm)^{1/2}} = (1+\lambda)^{1/2}$
$\frac{Em}{D} = \left(\frac{1}{1+\lambda}\right)^{1/2} - 2$
pulling 2 in 1









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Description of Notations
Sm - Software service capacity of saas service provider in
Cipo Cloud provider's CPU capacity
Cjiam - cloud providers memory capacity
Cit - cloud providers bandwidth capacity
Ujm - CPU payment
win - Memory payment
und -> Bandwidth payment
SaaSwer-pay" - The payment of saas user i
PCPU - CPU price
 Priam -> Momory price
  Pret - Bandwidth price
  vim - CPU allocated to saas provider m
  Vim - Memory allocated to saas provider m
  Vim - Bandwidth allocated to saas provider m
  Em - Saas providers budget
  EC;
      - Upper limit of energy cost
   Pe; - Electricity unit price
  Ti - Saas wor's deadline
  en'm - Energy consumed by provisioning resource
   2m -> computation survice requirement
   gram - Storage service requirement
    gnet -> transmission service requirement
```

Unesource provider Unison of Saas cloud system Usaaswer - whiting function of saas user. Xi = Sm * (Saasuser-pay m / SPm) Ei = Qsin SPm / Sm * Sanswer + paym where, SPm - Saas provider m's service price xim - fraction of software service leaved to Saas provider is i by Saas provider m. ti - The completion time for it Saasuser's nth job. -> utility function of saas provider as Usaasprovider as consumer a consumer or supplier. as surplier

QSin -> Soas sorvice requirement of sais user's job.