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In [ ]: ## Author: Yam Jason
```

```
In [1]: from pyspark.sql import SparkSession
```

```
spark = SparkSession\  
    .builder\  
    .appName("Consumer")\  
    .getOrCreate()
```

24/09/07 15:09:55 WARN Utils: Your hostname, WeirdSmile. resolves to a loopback address: 127.0.1.1; using 10.255.255.254 instead (on interface lo)
24/09/07 15:09:55 WARN Utils: Set SPARK_LOCAL_IP if you need to bind to another address
Setting default log level to "WARN".
To adjust logging level use sc.setLogLevel(newLevel). For SparkR, use setLogLevel(newLevel).
24/09/07 15:09:56 WARN NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
24/09/07 15:09:57 WARN Utils: Service 'SparkUI' could not bind on port 4040. Attempting port 4041.

Consume Messages

```
In [2]: sc = spark.sparkContext  
sc.addFile("../de_classes/event_streaming/KafkaConsumer.py")
```

```
In [3]: from KafkaConsumer import KafkaConsumerClass  
  
# Create an instance of KafkaConsumerClass  
positiveConsumer = KafkaConsumerClass(bootstrap_servers='localhost:9092'  
                                     , topic_name='positiveReviews')
```

```
In [ ]: # Consume messages  
positiveConsumer.consume_messages()
```

```
Received message: {'Positive Review': 'all item are good but get i order'}
Received message: {'Positive Review': 'good seller delivery man parcel good condition'}
Received message: {'Positive Review': 'comfortable mask'}
Received message: {'Positive Review': 'so good'}
Received message: {'Positive Review': 'best best best'}
Received message: {'Positive Review': 'v good tq'}
Received message: {'Positive Review': 'i am so happy i have received goods today i am very satisfied happy'}
Received message: {'Positive Review': 'fast delivery good quality nice packing will order again'}
Received message: {'Positive Review': 'received good condition'}
Received message: {'Positive Review': 'quality so so white face mask layer but grey only layer'}
Received message: {'Positive Review': 'brg sudah spi dengan safe delivery fast he likes tq seller'}
Received message: {'Positive Review': 'fast delivery received good condition valuable purchased'}
Received message: {'Positive Review': 'i have already purchased unlimited times i will continue return goods store mail will be delivered home time bleak'}
Received message: {'Positive Review': 'poorly packed masks packed ziplock bags but bags are not sealed can be opened up during delivery some masks are outside bags when received unhygienic'}
Received message: {'Positive Review': 'delivery bit slow because price cheap worth wait'}
Received message: {'Positive Review': 'very fast delivery worth money'}
Received message: {'Positive Review': 'received goods'}
Received message: {'Positive Review': 'good product'}
Received message: {'Positive Review': 'received items good condition just take bit longer time receive due pre order products'}
Received message: {'Positive Review': 'comfortable fit stylish design'}
Received message: {'Positive Review': 'item has arrived beautiful thank you seller'}
Received message: {'Positive Review': 'dark red not color manufacturer s pictures but color rose red'}
Received message: {'Positive Review': 'item ok but when until plastic koyak'}
Received message: {'Positive Review': 'thanks seller good product good package fast delivery'}
Received message: {'Positive Review': 'received good condition packing fast delivery highly recommend'}
Received message: {'Positive Review': 'items reached securely delivery thank you seller'}
Received message: {'Positive Review': 'worth buying can repeat seller'}
Received message: {'Positive Review': 'translator object has no attribute raise exception'}
Received message: {'Positive Review': 'translator object has no attribute raise exception'}
Received message: {'Positive Review': 'goods have received well you'}
Received message: {'Positive Review': 'delivery takes time well received good condition good packaging but less face mask maybe they count free gift also'}
Received message: {'Positive Review': 'very fast delivery ty'}
Received message: {'Positive Review': 'good quality but delivery took time perhaps due demand'}
Received message: {'Positive Review': 'fast delivery have not try use yet so unable comment much'}
Received message: {'Positive Review': 'excellent'}
Received message: {'Positive Review': 'goods up good condition tq seller'}
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Received message: {'Positive Review': 'packaging ok price reasonable just colour not  
accurate but disposal mask so no big issue'}  
Received message: {'Positive Review': 'fast delivery good service i m very like ittt  
ttttttt'}  
Received message: {'Positive Review': 'all item received thanks fast delivered like  
fast x thanks seller currier'}  
Received message: {'Positive Review': 'very very fast delivery cheap packed well pla  
stic bag'}  
Received message: {'Positive Review': 'received days product ok per descriptions'}  
Received message: {'Positive Review': 'ordered delivered correct type no packs but p  
ack contents were not counted second purchase but current black ones felt thinner th  
an my previous batch grey masks'}  
Received message: {'Positive Review': 'best shop thanks seller'}  
Received message: {'Positive Review': 'good'}  
Received message: {'Positive Review': 'received good condition fast delivery thank y  
ou'}  
Received message: {'Positive Review': 'nice'}  
Received message: {'Positive Review': 'other ones are tight uncomfortable ears these  
were perfect fits comfortable'}  
Received message: {'Positive Review': 'uninvited'}  
Received message: {'Positive Review': 'good receive my order thanks'}  
Received message: {'Positive Review': 'good will buy again'}  
Received message: {'Positive Review': 'received item good condition'}  
Received message: {'Positive Review': 'receive already quality also good tq'}  
Received message: {'Positive Review': 'time order seller trusted quality pounds okay  
not easily best'}  
Received message: {'Positive Review': 'good seller fast deliverygood seller fast del  
iverygood seller fast delivery'}  
Received message: {'Positive Review': 'short three packs masks'}  
Received message: {'Positive Review': 'perfect size adults comfortable fit stylish d  
esign convenient earloop design'}  
Received message: {'Positive Review': 'color not advertised s darker'}  
Received message: {'Positive Review': 'there are shortage packets my order i ordered  
but only received packets'}  
Received message: {'Positive Review': 'good product good quality good condition'}  
Received message: {'Positive Review': 'thanks you seller'}  
Received message: {'Positive Review': 'comfortable fit stylish design'}  
Received message: {'Positive Review': 'received good condition quality ok quantity c  
orrect fast delivery thank you seller'}  
Received message: {'Positive Review': 'mask sudah sampai fast delivery next time you  
can thank you'}  
Received message: {'Positive Review': 'mask bit thin ideal price'}  
Received message: {'Positive Review': 'items packed well received good condition rec  
eived different types masks'}  
Received message: {'Positive Review': 'tq seller fast fast delivery satisfied buy se  
ller cheap'}  
Received message: {'Positive Review': 'niceeeeeeee appropriate pretty'}  
Received message: {'Positive Review': 'good thanks seller'}  
Received message: {'Positive Review': 'tq'}  
Received message: {'Positive Review': 'good'}  
Received message: {'Positive Review': 'second order seller seller sold these items c  
heaper price i will repeat order once i used these'}  
Received message: {'Positive Review': 'value buy rm per pack free delivery during sa  
le thanks seller lazada'}  
Received message: {'Positive Review': 'after receiving goods some are disconnected e  
ssenceessenceessenceessenceessenceessenceessenceessenceessenceessenceessence
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Received message: {'Positive Review': 'ok very'}
Received message: {'Positive Review': 'items already reach best packing neat can repeat order lagi'}
Received message: {'Positive Review': 'good receive good condition tq lazada courier person'}
Received message: {'Positive Review': 'received good order condition thank you very much seller'}
Received message: {'Positive Review': 'parcel safe prices are affordable thank you seller'}
Received message: {'Positive Review': 'beautiful all received good cheap price seller ok shipping ok'}
Received message: {'Positive Review': 'nice item receive good condition correct quantity will buy again future'}
Received message: {'Positive Review': 'material ok delivery fast but maybe mask bit small me always slip off my nose'}
Received message: {'Positive Review': 'fast delivery well packed new stocks manufacturing date value money thank you seller'}
Received message: {'Positive Review': 'sorry picture has nothing do whatever i am satisfied mask you buy tq seller'}
Received message: {'Positive Review': 'fast delivery proper packing mask good condition'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'ok'}
Received message: {'Positive Review': 'received very good condition price good worth buy try quality good acceptable quality good packaging fast delivery really good delivery service happy satisfied my purchased trusted seller'}
Received message: {'Positive Review': 'thank good items be safe highly recommended'}
Received message: {'Positive Review': 'item has arrived boss why other packages boss squ what pon'}
Received message: {'Positive Review': 'please do not purchase from seller great cheater request duckbill but received shop lot deception tlg viral lazada impose heavy penalty people's guidance zero star'}
Received message: {'Positive Review': 'well packed fast delivery thank you so much lazada seller'}
Received message: {'Positive Review': 'good products'}
Received message: {'Positive Review': 'i order pack white mask but i received only i order total pack i just received pack last time i bought also less pack'}
Received message: {'Positive Review': 'fast delivery received good condition haven't use yet not sure quality'}
Received message: {'Positive Review': 'received good condition good quality worth price just delivery slow'}
Received message: {'Positive Review': 'i already received order tidak today but not pcs only pcs so sad order lazada next time'}
Received message: {'Positive Review': 'tq seller'}
Received message: {'Positive Review': 'received thanks good condition thank you so much seller'}
Received message: {'Positive Review': 'good material fast delivery'}
Received message: {'Positive Review': 'thank you seller good quality good good good good good'}
Received message: {'Positive Review': 'end possible delivery too slow anyway thanks'}
Received message: {'Positive Review': 'reliable seller deliver what i've chosen can repurchase seller again future just delivery service very lousy lazy'}
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Received message: {'Positive Review': 'received good condition mask look good thing
but useful fit man woman face'}
Received message: {'Positive Review': 'thankyouuuu can repeat order again'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'all item good just green colour not one i ord
ered order received'}
Received message: {'Positive Review': 'good very recommend buy i like'}
Received message: {'Positive Review': 'nice packing good service fast deluvery value
fot money'}
Received message: {'Positive Review': 'goods are good condition'}
Received message: {'Positive Review': 'good good good la deliver alys top d world bu
t limited colour available'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'item arrived days good quality will repurchas
e again'}
Received message: {'Positive Review': 'fast shipment item received excellent conditi
on excellent seller highly recommended'}
Received message: {'Positive Review': 'bought white color but give green color'}
Received message: {'Positive Review': 'i bought packs but only delivered very naught
y honesty best policy'}
Received message: {'Positive Review': 'quick comfortable wear fast delivery'}
Received message: {'Positive Review': 'item received good condition value money than
ks seller'}
Received message: {'Positive Review': 'receiver good condition'}
Received message: {'Positive Review': 'fast respond seller very cheap quality good w
ell'}
Received message: {'Positive Review': 'so far ok currently limited colour available
not much choice seller shd start restock delivery ust excellent'}
Received message: {'Positive Review': 'yet open package i m holidays will check he c
ontents when back'}
Received message: {'Positive Review': 'good quality products'}
Received message: {'Positive Review': 'good delivery about days good quality product
good value money'}
Received message: {'Positive Review': 'three packages less'}
Received message: {'Positive Review': 'delivery considered slow but arrived good con
dition good quality'}
Received message: {'Positive Review': 'received good condition well packing will rep
eat order again thank you seller delivery boy'}
Received message: {'Positive Review': 'fast delivery but s not medical mask'}
Received message: {'Positive Review': 'less pack'}
Received message: {'Positive Review': 'satisfied item price paid ear loop strap whit
e color quantity received accurate'}
Received message: {'Positive Review': 'goods have been received thank you seller'}
Received message: {'Positive Review': 'kecil mask macam mask budak sudah tu nipis sg
at qasa tidak berbaloi ja beli'}
Received message: {'Positive Review': 'received package good condition soft will sup
port again'}
Received message: {'Positive Review': 'i never received'}
Received message: {'Positive Review': 'received good condition'}
Received message: {'Positive Review': 'no good quality like layer only'}
Received message: {'Positive Review': 'yeppi yesesesesesesessddhfhdfbfbfbfbfbfbfbfbfbfbfbcbcb'}
Received message: {'Positive Review': 'goods received good condition n fast'}
Received message: {'Positive Review': 'delivery fast satisfied zanzan zanzan zanzan
zanzanzan zan ziwan zan ziwan zan ziwan zanzan praise praise praise praise pr

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aise praise praisepraise zanzanzanzan'}
Received message: {'Positive Review': 'alhamdulillah orders congratulations destinat
ion thank you'}
Received message: {'Positive Review': 'item has reached well tq seller'}
Received message: {'Positive Review': 'seller wrong color mask choose black can be w
hite even courier has come slowly'}
Received message: {'Positive Review': 'i have received thank you'}
Received message: {'Positive Review': 'received days items good condition thumbs up
seller'}
Received message: {'Positive Review': 'little thinner mask normal overall ok fit hrg
a'}
Received message: {'Positive Review': 'mask has reached best packing neatly no satis
faction'}
Received message: {'Positive Review': 'received gd condition'}
Received message: {'Positive Review': 'order light blue but received grey'}
Received message: {'Positive Review': 'received good condition fast delivery thank y
ou very much'}
Received message: {'Positive Review': 'thank you so much worth money thank you so mu
ch worth money'}
Received message: {'Positive Review': 'received good order feels thinner than anothe
r korean brand but acceptable will update after use'}
Received message: {'Positive Review': 'we received good condition fast delivery than
ks seller'}
Received message: {'Positive Review': 'fast delivery thank you seller delivery part
y'}
Received message: {'Positive Review': 'bought seller repeatedly good quality mask hi
ghly recommended'}
Received message: {'Positive Review': 'i ordered february after few time reminder i
received today mask how can type irresponsible supplier lazada i don t want use lowe
r quality mask i will throw dustbin'}
Received message: {'Positive Review': 'quality price are reasonable recommend buy se
ller fast delivery'}
Received message: {'Positive Review': 'received'}
Received message: {'Positive Review': 'very good seller responsive friendly highly r
ecommended'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'received good condition tq seller'}
Received message: {'Positive Review': 'item already boss tidak i could check son i w
ill keep review please all ok boss'}
Received message: {'Positive Review': 's my second purchase value monies'}
Received message: {'Positive Review': 'ok'}
Received message: {'Positive Review': 'quality things very good completely consisten
t seller s description very satisfied i really like completely beyond expected value
delivery speed very fast packaging very careful strict one shopping'}
Received message: {'Positive Review': 'received package evening well packaged all go
od condition thanks seller lazada service form seller great much appreciated thanks
lazada too delivery service excellent'}
Received message: {'Positive Review': 'goods have been securely accepted number enou
gh i am satisfied'}
Received message: {'Positive Review': 'reasonable price fast delivery'}
Received message: {'Positive Review': 'i want white colour but i got gray i dont lik
e gray colour'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'fast delivery good quality recommended seller
will purchase again'}
Received message: {'Positive Review': 'items received good condition correct items g

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ood quality'}
Received message: {'Positive Review': 'gd seller'}
Received message: {'Positive Review': 'item received good condition very fast delive
ry'}
Received message: {'Positive Review': 'all items received good condition cheap good
quality masks'}
Received message: {'Positive Review': 'very fast delivery tqsm'}
Received message: {'Positive Review': 'sorry new boss had chance rviu all items ok y
es qty enough good quality pound'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'good quality value money'}
Received message: {'Positive Review': 'ok'}
Received message: {'Positive Review': 'mask provides excellent protection'}
Received message: {'Positive Review': 'good quality value'}
Received message: {'Positive Review': 'ok nice'}
Received message: {'Positive Review': 'high quality materials used'}
Received message: {'Positive Review': 'items received good packaging super fast deli
very'}
Received message: {'Positive Review': 'fast delivery good condition thanks'}
Received message: {'Positive Review': 'congratulations thanks seller'}
Received message: {'Positive Review': 'ok la'}
Received message: {'Positive Review': 'quality ok fast delivery buy again if neede
d'}
Received message: {'Positive Review': 'item received good condition order correct th
ankyou seller delivery even cepatt'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'received mask well packed buy looks slightly
different picture advertised earloop white color not black'}
Received message: {'Positive Review': 'item has arrived thank you'}
Received message: {'Positive Review': 'received good condition fast delivery nice pa
cking'}
Received message: {'Positive Review': 'super love mask fits perfectly anti acne i bo
ught terus andd super fast shipping next day dapat dah terima kasih seller'}
Received message: {'Positive Review': 'received good condition'}
Received message: {'Positive Review': 'excellent'}
Received message: {'Positive Review': 'terbaekkk'}
Received message: {'Positive Review': 'delivered time frame safely arrived me hope a
ll ok can use no putus string whatsoever'}
Received message: {'Positive Review': 'value money received good condition fast deli
very'}
Received message: {'Positive Review': 'happy material quality'}
Received message: {'Positive Review': 'enough item cheap price satisfied later you c
an repeat order again'}
Received message: {'Positive Review': 'second time offer just dark green look differ
ent compare last order'}
Received message: {'Positive Review': 'good product truly layers fit face mask use i
give stars mainly due very slow poor delivery courier flash my kept weeks klang sort
ation center lazada shouldn t use flash anymore all their shipments are slow poor'}
Received message: {'Positive Review': 'quality no bad fast delivery will buy again'}
Received message: {'Positive Review': 'fast delivery nice item thank you seller laza
da'}
Received message: {'Positive Review': 'very fast delivery product good quality my th
ird purchase tq'}
Received message: {'Positive Review': 'delivery very fast received good condition no
damage worth cheap'}
Received message: {'Positive Review': 'good delivery good products next time buy aga

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in thanks'}
Received message: {'Positive Review': 'good products'}
Received message: {'Positive Review': 'everything good condition fast delivery'}
Received message: {'Positive Review': 'i like shop very much masks given are very good quality thank seller i like shop very much masks given are very good quality thank seller'}
Received message: {'Positive Review': 'worth buying'}
Received message: {'Positive Review': 'nice good quality'}
Received message: {'Positive Review': 'fast delivery received good condition masks look good'}
Received message: {'Positive Review': 'fast delivery tq seller'}
Received message: {'Positive Review': 'i think good me i will use review later you guys'}
Received message: {'Positive Review': 'received today thank you very much i hope good use colour also nice big face maybe tight me ok thank you'}
Received message: {'Positive Review': 'items are already accepting thanks'}
Received message: {'Positive Review': 'received items good condition well packing will buy again thank you seller'}
Received message: {'Positive Review': 'well received packets per unit order will repeat future thanks free gift duckbill face mask'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'mask provides excellent protection great design love'}
Received message: {'Positive Review': 'goods have reached quick delivery quality okkkkkkkkkkkkkkkkkkk'}
Received message: {'Positive Review': 'fast delivery murahhh'}
Received message: {'Positive Review': 'received very fast thanks seller'}
Received message: {'Positive Review': 'received good condition thanks seller will continue buying seller'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'received item good conditions'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'good quality fast delivery well packed'}
Received message: {'Positive Review': 'fast delivery value money come good conditions thank you seller'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'very cheap'}
Received message: {'Positive Review': 'convenient earloop design'}
Received message: {'Positive Review': 'fast delivery come good conditions value money thank you'}
Received message: {'Positive Review': 'received good condition thank you very much good package'}
Received message: {'Positive Review': 'product good condition quantity products i bought correct'}
Received message: {'Positive Review': 'palestinian peace join ramadan wakaf friday build mosque lebanon syrian refugees'}
Received message: {'Positive Review': 'just recd products very fast delivery hope quality acceptance standards'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'perfect nice fitting highly recommended thank you seller'}
Received message: {'Positive Review': 'soft soft soft'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'item received good condition thank you lazada thank you seller'}
Received message: {'Positive Review': 'done received item arrived safely sufficientl

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h'})

Received message: {'Positive Review': 'thickness like layers very bad'}

Received message: {'Positive Review': 'masks are ok wear goods are safe delivery fast price reasonable'}

Received message: {'Positive Review': 'i ordered black but seller sent me grey instead'}

Received message: {'Positive Review': 'received quantity per order but colour not same per order thanks seller cheaper than other seller quality good'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'quality mask worth money purchase got value money recommend purchase seller just little slow but over all good'}

Received message: {'Positive Review': 'hello boss goods i booked have been delivered safely my house thank you if you work hard if product good you will be repurchased thank you courier'}

Received message: {'Positive Review': 'i have been using these masks since covid epidemic i have maintained practice putting them every time i leave house has kept me safe i doubt i will ever stop using these masks works well better be safe than sorry'}

Received message: {'Positive Review': 'product arrived within expectation product amount type are correct per order'}

Received message: {'Positive Review': 'i order pkgs ply pkgs ply but only received pkgs ply'}

Received message: {'Positive Review': 'best seller'}

Received message: {'Positive Review': 'goods received good condition'}

Received message: {'Positive Review': 'easy wear fold secure nose clip snug fit comfortable fit stylish design'}

Received message: {'Positive Review': 'very nice product'}

Received message: {'Positive Review': 'price cheap bit thin'}

Received message: {'Positive Review': 'fast delivery value money recommended everything fine'}

Received message: {'Positive Review': 'always purchase masks shop cheap quality satisfaction'}

Received message: {'Positive Review': 'received wrong colours'}

Received message: {'Positive Review': 'goods are already available less one venzo car fragrant'}

Received message: {'Positive Review': 'nice'}

Received message: {'Positive Review': 'nice product fast delivery nice price good quality'}

Received message: {'Positive Review': 'good good good good good good good good good good good good good good good good good good'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'great top good good good good good good top good good good good good'}

Received message: {'Positive Review': 'beautiful beautiful beautiful beautiful beautiful beautiful'}

Received message: {'Positive Review': 'good product'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'fast delivery item well received good condition quality masks are just right'}

Received message: {'Positive Review': 'gradient one i received grey colour quality ok tq seller'}

Received message: {'Positive Review': 'quality very good delivery also fast thank you store'}

Received message: {'Positive Review': 'items are good condition very neat packaging very fast delivery'}

Received message: {'Positive Review': 'facemask safe thick no odor recommended you can buy again'}

Received message: {'Positive Review': 'i have received goods there no defect goods packaging very good thank you'}

Received message: {'Positive Review': 'good product fast delivery'}

Received message: {'Positive Review': 'received good condition quality wise good will repurchase again'}

Received message: {'Positive Review': 'parcel received good condition good value money good quality products'}

Received message: {'Positive Review': 'mask super thin i bought since my before much better than him seems doesn't seem be all'}

Received message: {'Positive Review': 'received good condition thanks seller will continue buying seller'}

Received message: {'Positive Review': 'shipping fast material bit thin but ok'}

Received message: {'Positive Review': 'after buying all them were all faded speechless i felt fake'}

Received message: {'Positive Review': 'korea mask layer disposable earloop face mask face color family careion white good condition i feel very satisfied worth price thank you seller lazada'}

Received message: {'Positive Review': 'until good circumstances delivery rather slow qualities ok nice mask ok just nipis la buy sokay well rarely do you want mask just buy incase mask use after whatever tq seller'}

Received message: {'Positive Review': 'received my order good condition fast response thanks'}

Received message: {'Positive Review': 'gd packing gd seller'}

Received message: {'Positive Review': 'great design love'}

Received message: {'Positive Review': 'tq'}

Received message: {'Positive Review': 'received thank you'}

Received message: {'Positive Review': 'good products'}

Received message: {'Positive Review': 'fits small face perfectly breathable'}

Received message: {'Positive Review': 'mask has glue smell unlike previous purchase but price acceptable'}

Received message: {'Positive Review': 'received within weeks overall quality okay quite thin layer than i expect'}

Received message: {'Positive Review': 'item received good condition good service thank you'}

Received message: {'Positive Review': 'ok item received good condition thanks seller'}

Received message: {'Positive Review': 'quite fast delivery value money will re order too bad same shop without kids mask'}

Received message: {'Positive Review': 'translator object has no attribute raise exception'}

Received message: {'Positive Review': 'convenient earloop design comfortable fit secure secure nose clip better fit highly recommended perfect size adults'}

Received message: {'Positive Review': 'sudah sampai tq'}

Received message: {'Positive Review': 'received different item what ordered seller should check properly first before sending customer'}

Received message: {'Positive Review': 'good quality product received good condition all while had been using brand like there are many colours choose'}

Received message: {'Positive Review': 'price cheap but bit thin'}

Received message: {'Positive Review': 'order but only received pointless argue further pack short worth'}

Received message: {'Positive Review': 'packs black are right but dark blue i have packs packs one more pack light blue dark blue turned light blue everything else right'}

Received message: {'Positive Review': 'received good order good supplier'}

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Received message: {'Positive Review': 'correct quantity thank you seller'}
Received message: {'Positive Review': 'packaging very tight so much so few packets masks are folded but usable am waiting next shipment latest masks again hope time packaging has improved'}
Received message: {'Positive Review': 'tq seller after finish will order again haven't open yet'}
Received message: {'Positive Review': 'fast delivery thank you seller lazada'}
Received message: {'Positive Review': 'perfect size adults'}
Received message: {'Positive Review': 'comfortable quality'}
Received message: {'Positive Review': 'received good condition no complain ok'}
Received message: {'Positive Review': 'buy until'}
Received message: {'Positive Review': 'fast delivery quantity acceptable readable price will purchase again'}
Received message: {'Positive Review': 'ok not bad'}
Received message: {'Positive Review': 'received good condition fast delivery thanks seller'}
Received message: {'Positive Review': 'bad'}
Received message: {'Positive Review': 'fast deliver good value money what you paid what you get'}
Received message: {'Positive Review': 'good product'}
Received message: {'Positive Review': 'good product fast delivery days cheaper product much affordable'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'mask ok tetapi payment but get je tgg la right before packing hmmm'}
Received message: {'Positive Review': 'mask all good delivery fast cheap price thanks seller stay safe'}
Received message: {'Positive Review': 'good condition product good service seller good service courier'}
Received message: {'Positive Review': 'ok thanks seller'}
Received message: {'Positive Review': 'ordered delivered purchase very well priced quite soft not rough facial skin'}
Received message: {'Positive Review': 'very fast delivery mask quality acceptable cost alright reasonable'}
Received message: {'Positive Review': 'fast delivery item deliver correctly good price products packaging handle care'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'quality normal delivery very efficient repeated order price reasonable'}
Received message: {'Positive Review': 'well done dearest seller very satisfied face mask'}
Received message: {'Positive Review': 'fast delivery good value money thank you very much'}
Received message: {'Positive Review': 'i always re purchase face mask my family good'}
Received message: {'Positive Review': 'received good condition fast delivery good value money'}
Received message: {'Positive Review': 'good mask'}
Received message: {'Positive Review': 'very good cheap packing also safe worry'}
Received message: {'Positive Review': 'second time repurchase quantity not too less each package has zip'}
Received message: {'Positive Review': 'thanks seller i have received above package good condition'}
Received message: {'Positive Review': 'purchased nov received dec super slow delivery ordered packs red but received one only another one received another colour but so fine'}
```

Received message: {'Positive Review': 'all items ok'}

Received message: {'Positive Review': 'thanks i do received my item'}

Received message: {'Positive Review': 'ok thqnks'}

Received message: {'Positive Review': 'convenient earloop design effective four layer filtration highly recommended perfect size adults'}

Received message: {'Positive Review': 'fast delivery orders received good condition'}

Received message: {'Positive Review': 'good packing'}

Received message: {'Positive Review': 'nice'}

Received message: {'Positive Review': 'easy wear remove waterproof dustproof highly recommended'}

Received message: {'Positive Review': 'good product good quality value money fast delivery'}

Received message: {'Positive Review': 'received good condition well packaged bubble wrap thanks sellers courier service'}

Received message: {'Positive Review': 'received good condition package quality looks good yet try'}

Received message: {'Positive Review': 'parcel received good condition i bought different colour layer mask not thin type like other seller worth buy pcs tq seller tq lazada tq lellexpress'}

Received message: {'Positive Review': 'good packing very fast delivery'}

Received message: {'Positive Review': 'has arrived thanks'}

Received message: {'Positive Review': 'items received'}

Received message: {'Positive Review': 'fast delivery good packaging received good condition'}

Received message: {'Positive Review': 'ok dpt like one who ordered'}

Received message: {'Positive Review': 'good receive good condition tq lazada courier person'}

Received message: {'Positive Review': 'item received good condition'}

Received message: {'Positive Review': 'good products thanks seller fast delivery can repeat order'}

Received message: {'Positive Review': 'good product quality good value money fast delivery excellent service seller'}

Received message: {'Positive Review': 'safe goods received reasonable price tq seller'}

Received message: {'Positive Review': 'item received good condition good product thank you very much'}

Received message: {'Positive Review': 'one thing do delivery slow good luck getting what ordered'}

Received message: {'Positive Review': 'cheaper price comfortable wear repeat order'}

Received message: {'Positive Review': 'arrived good order fast delivery thanks both seller delivery man'}

Received message: {'Positive Review': 'very fast delivery very worth money kids are still using school'}

Received message: {'Positive Review': 'buy many times seller already still usual good mask'}

Received message: {'Positive Review': 'nice packing good service fast delivery value for money'}

Received message: {'Positive Review': 'thank you prompt delivery thank you fast response'}

Received message: {'Positive Review': 'good quality products'}

Received message: {'Positive Review': 'fast delivery'}

Received message: {'Positive Review': 'received good condition but delivery delayed'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'fast delivery pretty purple smooth jee thank

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you seller then cheaphh pasni leh repeat order again borahae e _'}
Received message: {'Positive Review': 'tq'}
Received message: {'Positive Review': 'no good'}
Received message: {'Positive Review': 'order packets pcs received short packet pcs m
ask ask arrange resend back packet but seller said want apply coupon refund but unti
l now i m no see'}
Received message: {'Positive Review': 'things are very good price good i am satisfie
d worth buying i will buy again next time'}
Received message: {'Positive Review': 'facemask has received thanks'}
Received message: {'Positive Review': 'nice item received ready thk use seller terba
ik'}
Received message: {'Positive Review': 'ok tq brg sampai well'}
Received message: {'Positive Review': 'high quality materials used comfortable fit s
tylish design'}
Received message: {'Positive Review': 'high quality materials used convenient earloo
p design'}
Received message: {'Positive Review': 'quality maintained'}
Received message: {'Positive Review': 'best use price cheap repeat order time lot li
ttle'}
Received message: {'Positive Review': 'good product'}
Received message: {'Positive Review': 'good product quality fast delivery excellent
service seller'}
Received message: {'Positive Review': 'thanks'}
Received message: {'Positive Review': 'fast delivered seller'}
Received message: {'Positive Review': 'okay okay okay quality price very reasonable
continue support'}
Received message: {'Positive Review': 'fast delivery good packaging seller response
fast good value money good product quality'}
Received message: {'Positive Review': 'repeated order good'}
Received message: {'Positive Review': 'thank you seller'}
Received message: {'Positive Review': 'products packaging not see through can t see
mask colour inside'}
Received message: {'Positive Review': 'quality ok nice color fast delivery strong re
commend thank you seller'}
Received message: {'Positive Review': 'tq seller cheap buy seller worth nnti want re
peat oder again'}
Received message: {'Positive Review': 'everything good condition i just love looks s
imple nice definitely will order again'}
Received message: {'Positive Review': 'wrong color sending me'}
Received message: {'Positive Review': 'good good good good good good good good good
good good good good good good'}
Received message: {'Positive Review': 'good quality delivery time'}
Received message: {'Positive Review': 'received good condition i always buy here t
q'}
Received message: {'Positive Review': 'order light blue but receive different colour
shipping fast'}
Received message: {'Positive Review': 'ok'}
Received message: {'Positive Review': 'good deal abit thinner but use hourly daily s
hould be ok'}
Received message: {'Positive Review': 'stylish black color'}
Received message: {'Positive Review': 'purchase still happy purchase quality they di
dn t have light blue anymore but replaced'}
Received message: {'Positive Review': 'gggggggggggggggggggggggggggggggggggggggggg
gggood'}
Received message: {'Positive Review': 'all shades ok except would prefer lighter sha
de pink masks too small thin value money'}

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Received message: {'Positive Review': 'good product quality good value money may buy again seller'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'thanks seller delivery very fast sure repeat order'}

Received message: {'Positive Review': 'packages are intact high quality fast delivery good'}

Received message: {'Positive Review': 'all good'}

Received message: {'Positive Review': 'has been received okay'}

Received message: {'Positive Review': 'i order grey color packet white packet white color come packet ok but grey color come packet only'}

Received message: {'Positive Review': 'received good condition well packed colour nice comfy'}

Received message: {'Positive Review': 'i ordered navy blue but received light blue packing pounds different others'}

Received message: {'Positive Review': 'shipping slowly but all good'}

Received message: {'Positive Review': 'received products good order thank you seller love so much'}

Received message: {'Positive Review': 'very thin material even though when there layer mention look cheap material used'}

Received message: {'Positive Review': 'fast delivery item received few days not yet try looks ok'}

Received message: {'Positive Review': 'parcel received good condition products are ok but delivery time bit long thank you'}

Received message: {'Positive Review': 'good quality'}

Received message: {'Positive Review': 'quality pretty good price very affordable nice i am happy product'}

Received message: {'Positive Review': 'buy packs received only already few times keep repeated need improve'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'nice packaging product exactly same expected thank you'}

Received message: {'Positive Review': 'good'}

Received message: {'Positive Review': 'tq boss'}

Received message: {'Positive Review': 'goods are received good condition good value moneys'}

Received message: {'Positive Review': 'items have reached boss thank you all ok you can buy later'}

Received message: {'Positive Review': 'fast delivery good product recommend good good good'}

Received message: {'Positive Review': 'goods have been received like comfortable very good thank you delivery thank you merchant'}

Received message: {'Positive Review': 'colors nice good value money'}

Received message: {'Positive Review': 'fast delivery recommended seller thanks extra free gift appreciate'}

Received message: {'Positive Review': 'good product good quality fast delivery will recommend friends'}

Received message: {'Positive Review': 'item received good condition exactly same described page will purchase again future'}

Received message: {'Positive Review': 'good value money fast delivery good product quality thank you seller'}

Received message: {'Positive Review': 'received items good condition thank you seller lazada delivery man'}

Received message: {'Positive Review': 'order took longer than expected considering shipped within country although price cheap masks received are very thin so much so wire nose part always poked through scratched face don't think they provide sufficient

localhost:8888/lab/tree/G3 B/notebooks/04 Kafka Streaming/Topic 1 (Positive)/Consumer.ipynb 15/18

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Received message: {'Positive Review': 'tq seller brng already smpi'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'tq so much'}
Received message: {'Positive Review': 'excellent service seller good product quality
fast delivery will repeat order again soon'}
Received message: {'Positive Review': 'comfortable use'}
Received message: {'Positive Review': 'looks good but still not using yet same like
what advertised'}
Received message: {'Positive Review': 'reasonable price'}
Received message: {'Positive Review': 'tq'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'super fast delivery trusted seller repeat ord
er tqvm'}
Received message: {'Positive Review': 'good product quality good value money fast de
livery'}
Received message: {'Positive Review': 'fast delivery selected colour correctly sent
will buy again seller'}
Received message: {'Positive Review': 'not open d parcel yet'}
Received message: {'Positive Review': 'ok good'}
Received message: {'Positive Review': 'tq'}
Received message: {'Positive Review': 'nice solid packing goods received good condit
ion thanks'}
Received message: {'Positive Review': 'colour s not ok'}
Received message: {'Positive Review': 'quality product baik'}
Received message: {'Positive Review': 'goods ok but when until plastic koyak'}
Received message: {'Positive Review': 'reasonable price fast delivery'}
Received message: {'Positive Review': 'mask material very thin but price very cheap
one ringgit packed mask'}
Received message: {'Positive Review': 'thanks seller good product service very fast
again again repeat order recommended'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'items received good condition fast delivery v
alue money paid'}
Received message: {'Positive Review': 'thanks'}
Received message: {'Positive Review': 'convenient earloop design effective four laye
r filtration perfect size adults secure nose clip snug fit'}
Received message: {'Positive Review': 'quality good before fast delivery price chea
p'}
Received message: {'Positive Review': 'thank you seller be solid cheap prices compar
ed other places'}
Received message: {'Positive Review': 'facemask has been received good condition tha
nks'}
Received message: {'Positive Review': 'product well packed correct items were receiv
ed thanks seller'}
Received message: {'Positive Review': 'good useful comfortable wear low price thank
seller lazada'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'brg already'}
Received message: {'Positive Review': 'item arrive good condition'}
Received message: {'Positive Review': 'delivery time good quality'}
Received message: {'Positive Review': 'item received good condition wrapped well hig
hly recommended'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'items are safe quality ok herga ok slow deliv
ery'}
```



```
Received message: {'Positive Review': 'good quality reasonable price'}
Received message: {'Positive Review': 'good product fast delivery satisfied good response reasonable price'}
Received message: {'Positive Review': 'effective four layer filtration comfortable fit stylish design convenient earloop design'}
Received message: {'Positive Review': 'received gd condition'}
Received message: {'Positive Review': 'perfect size adults effective four layer filtration high quality materials used easy wear fold'}
Received message: {'Positive Review': 'nice'}
Received message: {'Positive Review': 'thanks seller lazada despatch boy items received good condition pricing very reasonable will order again future'}
Received message: {'Positive Review': 'zx'}
Received message: {'Positive Review': 'well received'}
Received message: {'Positive Review': 'tq seller'}
Received message: {'Positive Review': 'received good condition prompt delivery trust worthy reliable seller'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'translator object has no attribute raise exception'}
Received message: {'Positive Review': 'fast delivery price resonable'}
Received message: {'Positive Review': 'delivery fast mask good not too thin not too thick'}
Received message: {'Positive Review': 'fast delivery'}
Received message: {'Positive Review': 'boss goods have arrived safely i am very satisfied seller s goods'}
Received message: {'Positive Review': 'sampai good condition tq seller all colors are black tli but they are white s different thing everything else ok tq may we all be cheap provision'}
Received message: {'Positive Review': 'received good condition'}
Received message: {'Positive Review': 'repeat purchase comfortable value buy fast shipping delivery'}
Received message: {'Positive Review': 'very thun mask'}
Received message: {'Positive Review': 'good items'}
Received message: {'Positive Review': 'received good condition good product quality highly recommended'}
Received message: {'Positive Review': 'good product quality value money delivery time'}
Received message: {'Positive Review': 'after receiving courier quickly penny little thinner than previously bought but you can still use after buying back comparison next time i will use time being'}
Received message: {'Positive Review': 'received items good condition fast delivery affordable price trusted seller will purchase again seller future'}
Received message: {'Positive Review': 'good product shipping not too late'}
Received message: {'Positive Review': 'good'}
Received message: {'Positive Review': 'good seller fast deliverygood seller fast deliverygood seller fast delivery'}
Received message: {'Positive Review': 'mask ok beautiful tq seller courier'}
Received message: {'Positive Review': 'good fast delivery'}
Received message: {'Positive Review': 'easy wear fold'}
Received message: {'Positive Review': 'very good'}
Received message: {'Positive Review': 'price very cheap but material like price paid very thin so so only delivery very fast'}
Received message: {'Positive Review': 'package until safe tq lazada i like me like me'}
Received message: {'Positive Review': 'highly recommended easy wear remove effective four layer filtration'}
```

```
Received message: {'Positive Review': 'good delivery good quality product good value  
money good seller'}  
Received message: {'Positive Review': 'good'}  
Received message: {'Positive Review': 'i think good me i will use review later you g  
uys'}  
Received message: {'Positive Review': 'kati m mask hohzur k l lagi seat magnes seat  
ahilyni'}  
Received message: {'Positive Review': 'fast delivery received good xondition will pu  
rchase again'}  
Received message: {'Positive Review': 'time purchase'}
```

```
In [ ]: # Close the consumer connection  
        positiveConsumer.close()
```

```
In [ ]: spark.stop()
```