

```
employees = [  
  {  
    "first_name": "Jose",  
    "last_name": "Lopez",  
    "email": "joselopez0944@example.com",  
    "age": 25,  
    "job_title": "Project Manager",  
    "years_of_experience": 1,  
    "salary": 8500,  
    "department": "Product"  
  },  
  {  
    "first_name": "Diane",  
    "last_name": "Carter",  
    "email": "dianecarter1228@example.com",  
    "age": 26,  
    "job_title": "Machine Learning Engineer",  
    "years_of_experience": 2,  
    "salary": 7000,  
    "department": "Product"  
  },  
  {  
    "first_name": "Shawn",  
    "last_name": "Foster",  
    "email": None,  
    "age": 37,  
    "job_title": "Customer Service Rep",  
    "years_of_experience": 14,  
    "salary": 17000,  
    "department": "Business"  
  },  
  {  
    "first_name": "Brenda",  
    "last_name": "Fisher",  
    "email": "brendafisher3185@example.com",  
    "age": 31,  
    "job_title": "Web Developer",  
    "years_of_experience": 8,  
    "salary": 10000,  
    "department": "Product"  
  },  
  {  
    "first_name": "Sean",  
    "last_name": "Hunter",  
    "email": None,  
    "age": 35,  
    "job_title": "Project Manager",  
    "years_of_experience": 11,  
  }  
]
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"salary":14500,
"department":"Product"
},
{
  "first_name":"Joshua",
  "last_name":"Jacobs",
  "email":"joshuajacobs5904@example.com",
  "age":28,
  "job_title":"Project Manager",
  "years_of_experience":3,
  "salary":10500,
  "department":"Business"
},
{
  "first_name":"Brianna",
  "last_name":"Marshall",
  "email":None,
  "age":33,
  "job_title":"Machine Learning Engineer",
  "years_of_experience":10,
  "salary":11000,
  "department":"Product"
},
{
  "first_name":"John",
  "last_name":"Tate",
  "email":"johntate7881@example.com",
  "age":33,
  "job_title":"Mobile Developer",
  "years_of_experience":10,
  "salary":11000,
  "department":"Product"
},
{
  "first_name":"Jillian",
  "last_name":"Byrd",
  "email":None,
  "age":34,
  "job_title":"Business Analyst",
  "years_of_experience":10,
  "salary":11000,
  "department":"Business"
},
{
  "first_name":"Melanie",
  "last_name":"Sharp",
  "email":"melaniesharp9256@example.com",
  "age":41,
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"job_title": "Web Developer",
"years_of_experience": 15,
"salary": 14500,
"department": "Product"
},
{
  "first_name": "Brandy",
  "last_name": "McKee",
  "email": None,
  "age": 37,
  "job_title": "Marketing Manager",
  "years_of_experience": 14,
  "salary": 14000,
  "department": "Business"
},
{
  "first_name": "Robert",
  "last_name": "Simpson",
  "email": "robertsimpson11778@example.com",
  "age": 36,
  "job_title": "Marketing Manager",
  "years_of_experience": 12,
  "salary": 15000,
  "department": "Business"
},
{
  "first_name": "George",
  "last_name": "McKenzie",
  "email": "georgemckenzie12384@example.com",
  "age": 28,
  "job_title": "Machine Learning Engineer",
  "years_of_experience": 4,
  "salary": 10000,
  "department": "Product"
},
{
  "first_name": "Joseph",
  "last_name": "Smith",
  "email": None,
  "age": 40,
  "job_title": "Machine Learning Engineer",
  "years_of_experience": 14,
  "salary": 14000,
  "department": "Product"
},
{
  "first_name": "Dana",
  "last_name": "Crawford",
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"email": "danacrawford14310@example.com",
"age": 32,
"job_title": "Project Manager",
"years_of_experience": 8,
"salary": 12000,
"department": "Product"
},
{
  "first_name": "Christopher",
  "last_name": "Benson",
  "email": None,
  "age": 29,
  "job_title": "Web Developer",
  "years_of_experience": 5,
  "salary": 7500,
  "department": "Product"
},
{
  "first_name": "Nicole",
  "last_name": "Smith",
  "email": "nicolesmith16360@example.com",
  "age": 26,
  "job_title": "Designer",
  "years_of_experience": 4,
  "salary": 10000,
  "department": "Product"
},
{
  "first_name": "Peter",
  "last_name": "Jimenez",
  "email": "peterjimenez17791@example.com",
  "age": 28,
  "job_title": "UX Designer",
  "years_of_experience": 3,
  "salary": 6500,
  "department": "Business"
},
{
  "first_name": "Sergio",
  "last_name": "Boyle",
  "email": "sergioboyle18425@example.com",
  "age": 31,
  "job_title": "Tester",
  "years_of_experience": 6,
  "salary": 9000,
  "department": "Product"
},
{
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"first_name":"Brianna",
"last_name":"Moss",
"email":None,
"age":31,
"job_title":"Designer",
"years_of_experience":5,
"salary":10500,
"department":"Product"
},
{
"first_name":"Taylor",
"last_name":"Garner",
"email":"taylorgarner20196@example.com",
"age":32,
"job_title":"Machine Learning Engineer",
"years_of_experience":6,
"salary":11000,
"department":"Product"
},
{
"first_name":"Michael",
"last_name":"Padilla",
"email":"michaelpadilla21381@example.com",
"age":29,
"job_title":"Customer Service Rep",
"years_of_experience":5,
"salary":9500,
"department":"Business"
},
{
"first_name":"Yvette",
"last_name":"Walker",
"email":None,
"age":26,
"job_title":"Designer",
"years_of_experience":2,
"salary":7000,
"department":"Product"
},
{
"first_name":"Kristina",
"last_name":"Pena",
"email":"kristinapena23750@example.com",
"age":34,
"job_title":"Business Analyst",
"years_of_experience":11,
"salary":12500,
"department":"Business"
}
```

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    }
]

# Print the name of the person who has highest salary at the company

employee_with_high_salary = employees[0]

for employee in employees:
    if(employee['salary']>employee_with_high_salary['salary']):
        employee_with_high_salary = employee

print(f"Name of the person with highest salary:
{employee_with_high_salary['first_name']}
{employee_with_high_salary['last_name']}")

# Print the combined year of experience of all employees at the company

total_years_of_experience=0
for employee in employees:
    total_years_of_experience+= employee['years_of_experience']

print(f"Combined years of experience: {total_years_of_experience} years")

# Employees without email address
employee_without_email=[]

for employee in employees:
    if(employee['email']=="" or employee['email']==None):
        employee_without_email.append(employee)

print(employee_without_email)

# More costly department based on salary

cost_product=0
cost_business=0

for employee in employees:
    if(employee['department']=='Product'):
        cost_product+= employee['salary']
    elif(employee['department']=='Business'):
        cost_business+=employee['salary']

print(f"More costly department is: {'Business'if cost_business>cost_product
else 'Product'} is more costly")

# Extension work
# Average salary for people over age 30

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no_of_employee=0
total_salary=0

for employee in employees:
    if employee['age']>30:
        total_salary+=employee["salary"]
        no_of_employee+=1

print(f"Average salary over age of 30 is: {total_salary/no_of_employee:.2f}")

# Creating dictionary for caclutating how many people working on certain job
d={}

for employee in employees:
    d[employee['job_title']]=0

for employee in employees:
    d[employee['job_title']]+=1

print(f"Dictionary for employee working on certain job: {d}")

```

Output Log:

Name of the person with highest salary: Shawn Foster

Combined years of experience: 183 years

y': 17000, 'department': 'Business'}, {'first_name': 'Sean', 'last_name': 'Hunter', 'email': None, 'age': 35, 'job_title': 'Project Manager', 'years_of_experience': 11, 'salary': 14500, 'department': 'Product'}, {'first_name': 'Brianna', 'last_name': 'Marshall', 'email': None, 'age': 33, 'job_title': 'Machine Learning Engineer', 'years_of_experience': 10, 'salary': 11000, 'department': 'Product'}, {'first_name': 'Jillian', 'last_name': 'Byrd', 'email': None, 'age': 34, 'job_title': 'Business Analyst', 'years_of_experience': 10, 'salary': 11000, 'department': 'Business'}, {'first_name': 'Brandy', 'last_name': 'Mckee', 'email': None, 'age': 37, 'job_title': 'Marketing Manager', 'years_of_experience': 14, 'salary': 14000, 'department': 'Business'}, {'first_name': 'Joseph', 'last_name': 'Smith', 'email': None, 'age': 40, 'job_title': 'Machine Learning Engineer', 'years_of_experience': 14, 'salary': 14000, 'department': 'Product'}, {'first_name': 'Christopher', 'last_name': 'Benson', 'email': None, 'age': 29, 'job_title': 'Web Developer', 'years_of_experience': 5, 'salary': 7500, 'department': 'Product'}, {'first_name': 'Brianna', 'last_name': 'Moss', 'email': None, 'age': 31, 'job_title': 'Designer', 'years_of_experience': 5, 'salary': 10500,

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'department': 'Product'}, {'first_name': 'Yvette', 'last_name': 'Walker', 'email': None, 'age': 26, 'job_title': 'Designer', 'years_of_experience': 2, 'salary': 7000, 'department': 'Product']}]
```

More costly department is: Product is more costly

Average salary over age of 30 is: 12466.67

Dictionary for employee working on certain job: {'Project Manager': 4, 'Machine Learning Engineer': 5, 'Customer Service Rep': 2, 'Web Developer': 3, 'Mobile Developer': 1, 'Business Analyst': 2, 'Marketing Manager': 2, 'Designer': 3, 'UX Designer': 1, 'Tester': 1}